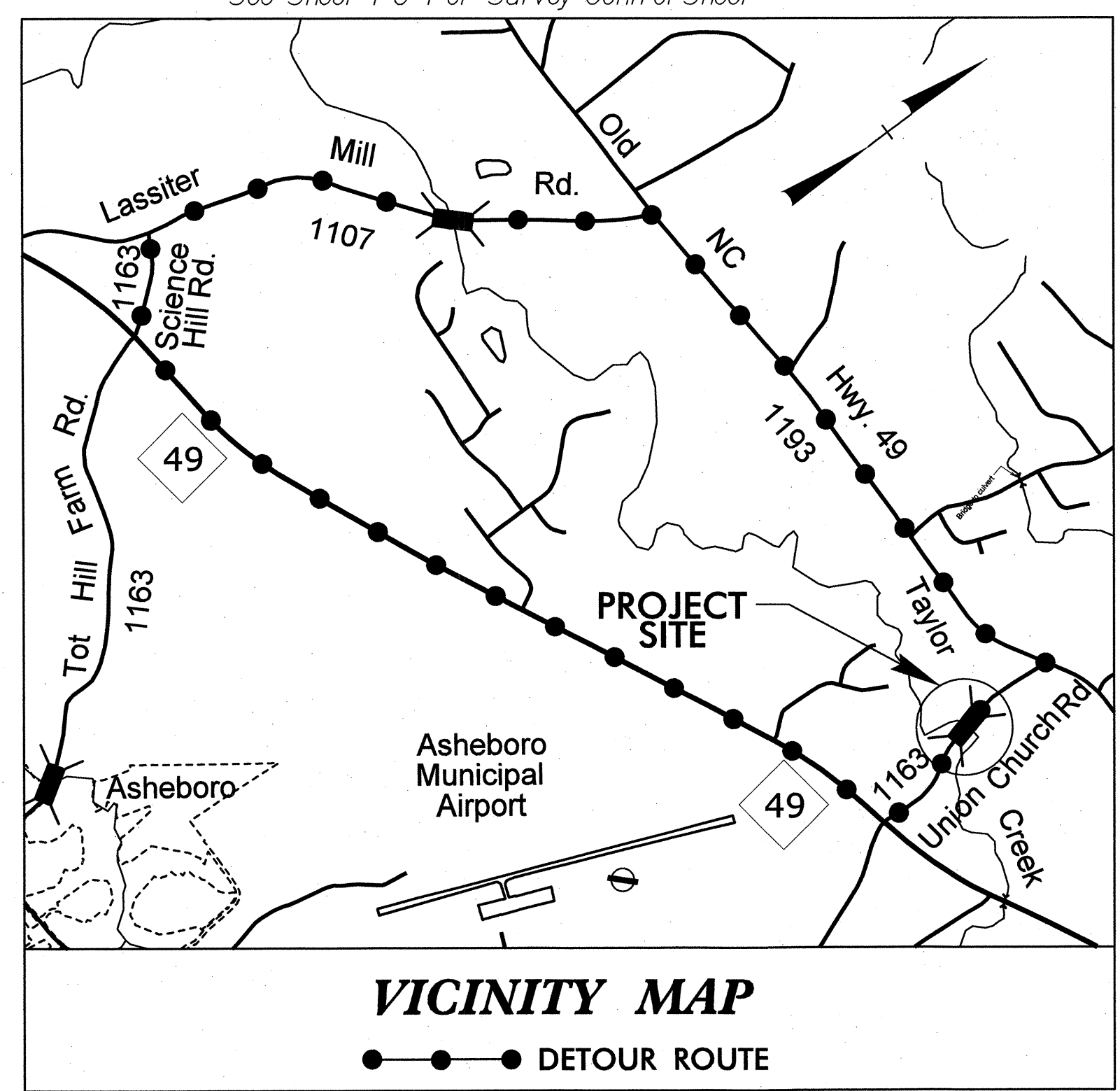


09/08/99

See Sheet 1-A For Index of Sheets
 See Sheet 1-B For Conventional Symbols
 See Sheet 1-C For Survey Control Sheet



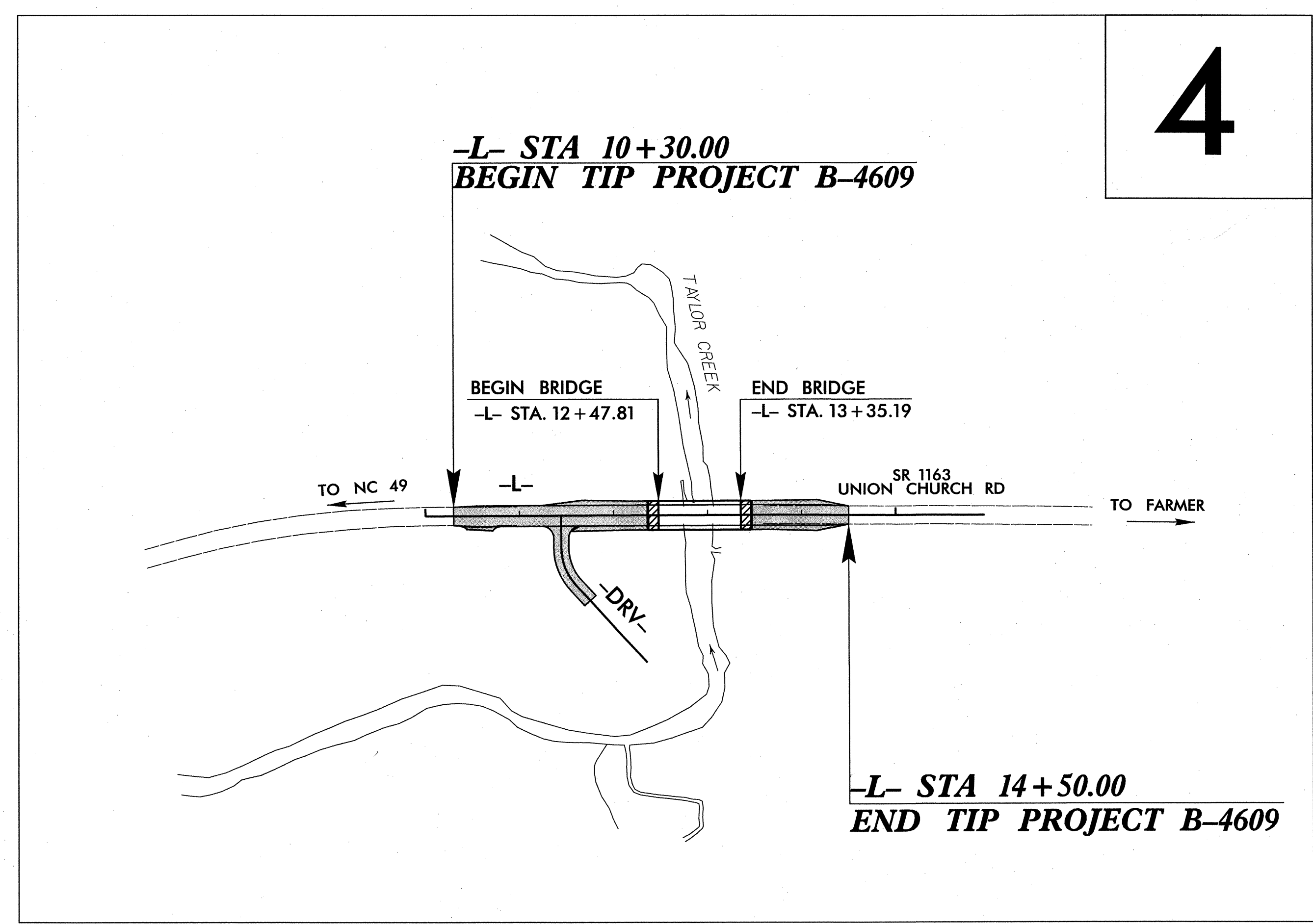
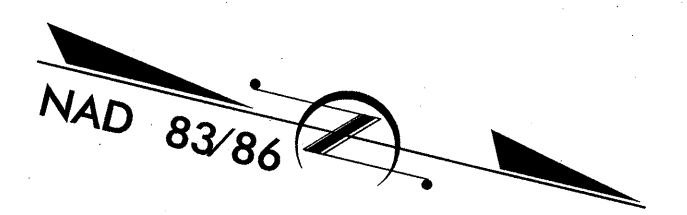
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

RANDOLPH COUNTY

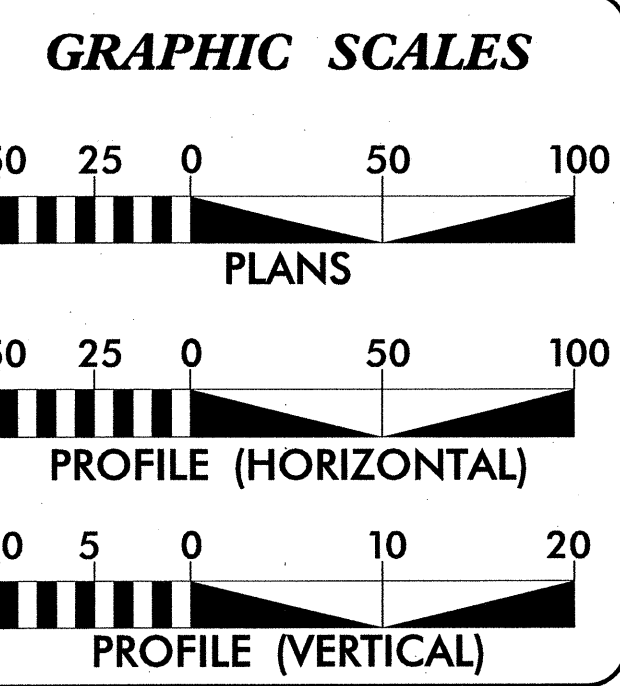
LOCATION: BRIDGE NO. 16 OVER TAYLOR CREEK ON SR 1163

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4609	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38434.1.1	BRZ-1163(6)	PE	
38434.2.1	BRZ-1163(6)	RW, UTIL	
38434.3.FD1	BRZ-1163(6)	CONSTR.	



** DESIGN EXCEPTION FOR SAG VERTICAL CURVE K VALUE AND VERTICAL STOPPING SIGHT DISTANCE



DESIGN DATA

ADT 2013 = 1160
ADT 2033 = 1800
DHV = 13 %
D = 65 %
T = 2 % *
** V = 50 MPH
* (TTST = 1% + DUAL 1%)
FUNC CLASS =
RURAL LOCAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-4609	=	0.063 MILES
LENGTH OF STRUCTURE TIP PROJECT B-4609	=	0.017 MILES
TOTAL LENGTH OF TIP PROJECT B-4609	=	0.080 MILES

Prepared for the North Carolina Department of Transportation in the office of:

PLANS PREPARED BY
PARSONS
5540 Corporate Park, Suite 217
 10000 North Carolina Highway 101, Raleigh, NC 27615
 NC License No. F-2014
 FOR NORTH CAROLINA STATE DEPARTMENT OF TRANSPORTATION

2012 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE:
 NOVEMBER 16, 2012
LETTING DATE:
 DECEMBER 17, 2013

SUNGATE DESIGN GROUP, P.A.
10000 North Carolina Highway 101, Suite 217
 Raleigh, NC 27615
 NC License No. F-2014
 FOR NORTH CAROLINA STATE DEPARTMENT OF TRANSPORTATION

TIM D. GOINS, PE
 PROJECT ENGINEER

DAVID GARRETT
 PROJECT DESIGN ENGINEER

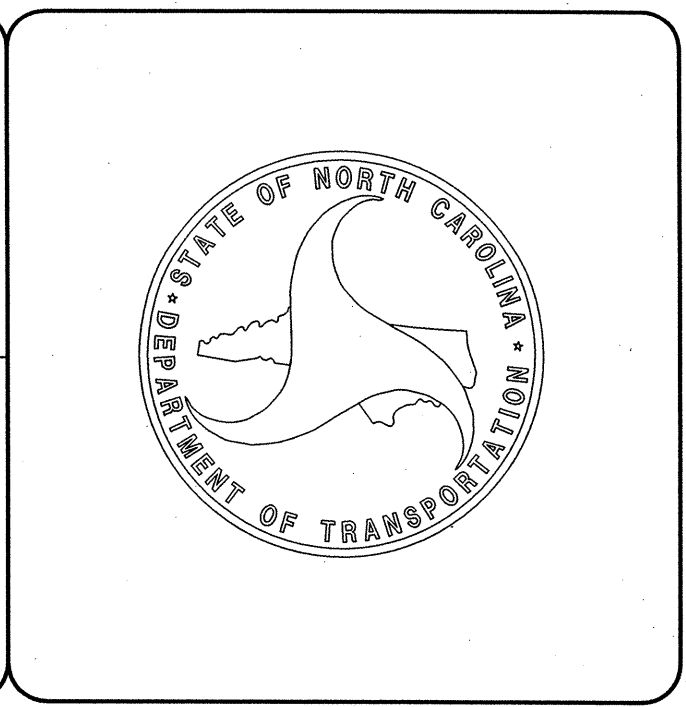
NCDOT CONTACT:
BRENDA L. MOORE, PE
 ROADWAY DESIGN-ENGINEERING COORDINATION SECTION ENGINEER

HYDRAULICS ENGINEER

ROADWAY DESIGN ENGINEER

SIGNATURE: *[Signature]* 9/24/13

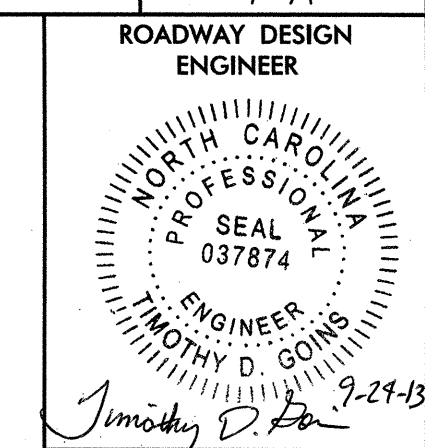
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TIP PROJECT: B-4609

CONTRACT: C203282



EFF. 01-17-2012
REV. 10-30-2012

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 07-30-2012

INDEX OF SHEETS

1	Title Sheet
1-A	Index of Sheets, General Notes, and List of Standards
1-B	Conventional Symbols
1-C	Survey Control Sheet
2	Typical Sections and Pavement Schedule
2-A	Structure Anchor Unit, Type III Detail
3	Summary of Quantities
3-A	Summary of Earthwork, Drainage, Guardrail, Pavement Removal, Shoulder Berm Gutter and Special Shoulder Berm Curb
4	Plan Sheet
5	Profile Sheet
TMP-1 thru TMP-3	Transportation Management Plans
PMP-1	Pavement Marking Plan
EC-1 thru EC-5	Erosion Control Plans
SIGN-1 thru SIGN-2	Signing Plans
U0-1 thru U0-2	Utilities By Others Plans
X-1A	Cross-Section Summary Sheet
X-1 thru X-4	Cross-Sections
S-1 thru S-18	Structure Plans

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C.. Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.11	Reinforced Bridge Approach Fills - Sub Regional Tier
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
840.00	Concrete Base Pad for Drainage Structures
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.46	Traffic Bearing Precast Drainage Structure
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE

CENTURY LINK

TIME WARNER CABLE

PROGRESS ENERGY

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

12/05/11

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	_____
County Line	_____
Township Line	_____
City Line	_____
Reservation Line	_____
Property Line	_____
Existing Iron Pin	○
Property Corner	⊗
Property Monument	□
Parcel/Sequence Number	123
Existing Fence Line	—x—x—x—
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	—WLB—
Proposed Wetland Boundary	—WLB—
Existing Endangered Animal Boundary	—EAB—
Existing Endangered Plant Boundary	—EPB—
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	⊕
Small Mine	⊗
Foundation	□
Area Outline	□
Cemetery	⊕
Building	□
School	□
Church	⊕
Dam	□

HYDROLOGY:

Stream or Body of Water	_____
Hydro, Pool or Reservoir	□
Jurisdictional Stream	—JS—
Buffer Zone 1	—BZ 1—
Buffer Zone 2	—BZ 2—
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	⬇
Proposed Lateral, Tail, Head Ditch	—FLM—
False Sump	◇

RAILROADS:

Standard Gauge	_____
RR Signal Milepost	○
Switch	□
RR Abandoned	_____
RR Dismantled	_____

RIGHT OF WAY:

Baseline Control Point	◇
Existing Right of Way Marker	△
Existing Right of Way Line	_____
Proposed Right of Way Line	—RW—
Proposed Right of Way Line with Iron Pin and Cap Marker	—RW—▲
Proposed Right of Way Line with Concrete or Granite RW Marker	—RW—▲
Proposed Control of Access Line with Concrete C/A Marker	—C/A—
Existing Control of Access	—C/A—
Proposed Control of Access	—C/A—
Existing Easement Line	—E—
Proposed Temporary Construction Easement	—E—
Proposed Temporary Drainage Easement	—TDE—
Proposed Permanent Drainage Easement	—PDE—
Proposed Permanent Drainage / Utility Easement	—DUE—
Proposed Permanent Utility Easement	—PUE—
Proposed Temporary Utility Easement	—TUE—
Proposed Aerial Utility Easement	—AUE—
Proposed Permanent Easement with Iron Pin and Cap Marker	—E—▲

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	_____
Existing Curb	_____
Proposed Slope Stakes Cut	—C—
Proposed Slope Stakes Fill	—F—
Proposed Curb Ramp	—CR—
Existing Metal Guardrail	—T—T—T—
Proposed Guardrail	—T—T—T—
Existing Cable Guiderail	—T—T—T—
Proposed Cable Guiderail	—T—T—T—
Equality Symbol	⊕
Pavement Removal	▒
VEGETATION:	
Single Tree	⊕
Single Shrub	⊕
Hedge	—
Woods Line	—

Orchard	⊕
Vineyard	□

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	—CONC—
Bridge Wing Wall, Head Wall and End Wall	—CONC WW—
MINOR:	
Head and End Wall	—CONC HW—
Pipe Culvert	—
Footbridge	—
Drainage Box: Catch Basin, DI or JB	—CB—
Paved Ditch Gutter	—
Storm Sewer Manhole	⊕
Storm Sewer	—S—

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊗
Power Transformer	⊗
U/G Power Cable Hand Hole	—
H-Frame Pole	—
Recorded U/G Power Line	—P—
Designated U/G Power Line (S.U.E.*)	—P—

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Booth	□
Telephone Pedestal	⊕
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	—
Recorded U/G Telephone Cable	—T—
Designated U/G Telephone Cable (S.U.E.*)	—T—
Recorded U/G Telephone Conduit	—TC—
Designated U/G Telephone Conduit (S.U.E.*)	—TC—
Recorded U/G Fiber Optics Cable	—T FO—
Designated U/G Fiber Optics Cable (S.U.E.*)	—T FO—

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	—
Designated U/G Water Line (S.U.E.*)	—
Above Ground Water Line	—A/G Water—

TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊗
U/G TV Cable Hand Hole	—
Recorded U/G TV Cable	—TV—
Designated U/G TV Cable (S.U.E.*)	—TV—
Recorded U/G Fiber Optic Cable	—TV FO—
Designated U/G Fiber Optic Cable (S.U.E.*)	—TV FO—

GAS:

Gas Valve	◇
Gas Meter	⊕
Recorded U/G Gas Line	—G—
Designated U/G Gas Line (S.U.E.*)	—G—
Above Ground Gas Line	—A/G Gas—

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	—SS—
Above Ground Sanitary Sewer	—A/G Sanitary Sewer—
Recorded SS Forced Main Line	—FSS—
Designated SS Forced Main Line (S.U.E.*)	—FSS—

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	—UTIL—
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

SURVEY CONTROL SHEET B-4609

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
101	BL-101	699909.2128	1736383.1291	574.36	OUTSIDE PROJECT LIMITS	
102	BL-102	700504.6156	1736196.3500	551.88	13+21.94	13.01 LT
103	BL-103	700877.4950	1736137.2086	574.98	OUTSIDE PROJECT LIMITS	

.....
 BM1 ELEVATION - 544.07
 N 700471 E 1736308
 L STATION 12+50.00 143 RIGHT
 RR-SPIKE IN BASE OF 181N HICKORY TREE

 BM2 ELEVATION - 579.66
 N 700857 E 1736177
 L STATION 18+00.00
 N 09°14'58.93" W DIST 671.33
 RR-SPIKE IN BASE OF 201N PINE TREE

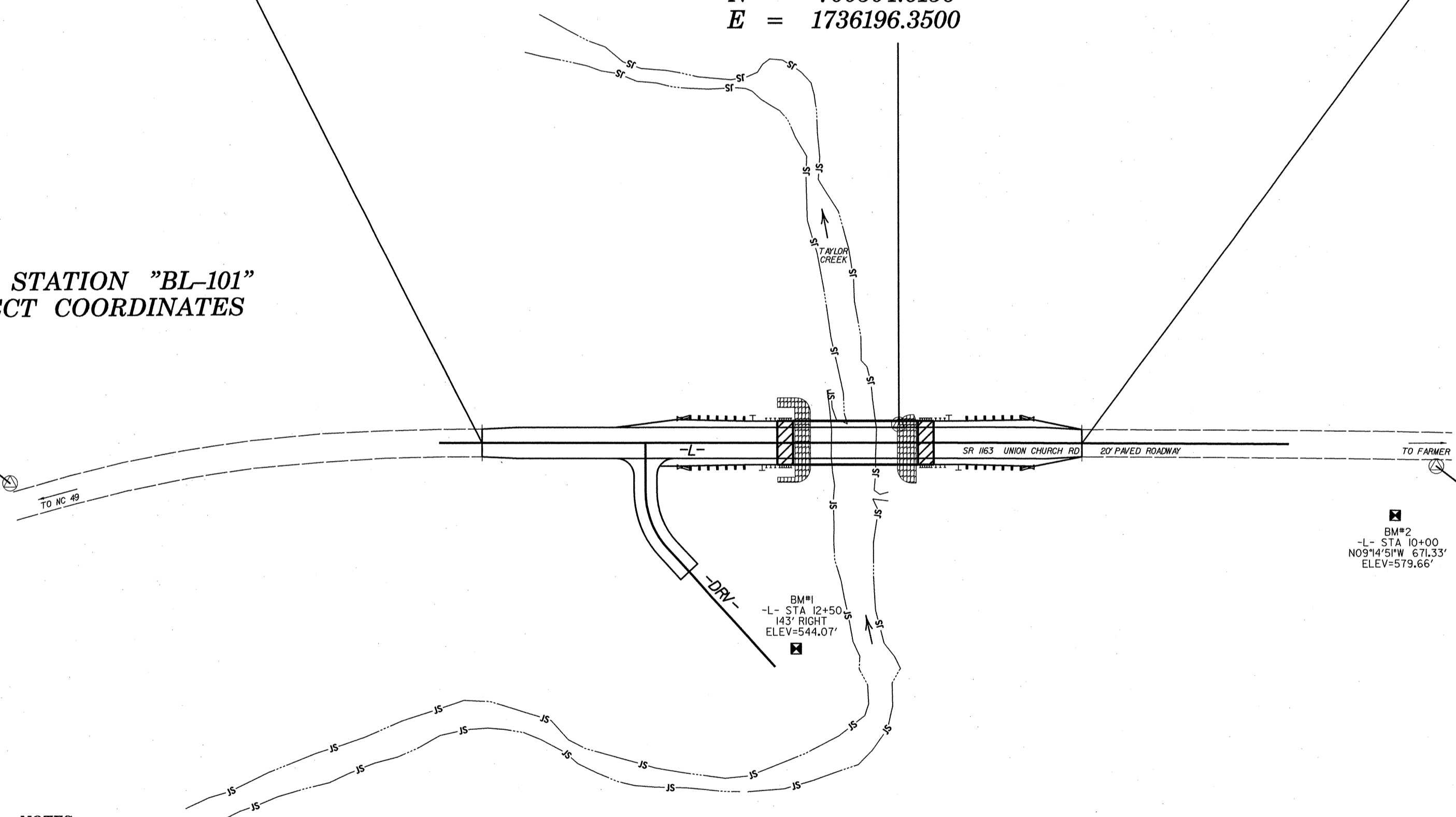
LOCALIZED PROJECT COORDINATES
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N = 700223.9949
E = 1736277.8942

LOCALIZED PROJECT COORDINATES
-L- STA. 14+50.00 END TIP PROJECT B-4609
N = 700632.2564
E = 1736179.2976

NCDOT BASELINE STATION "BL-102"
LOCALIZED PROJECT COORDINATES
N = 700504.6156
E = 1736196.3500

NCDOT BASELINE STATION "BL-101"
LOCALIZED PROJECT COORDINATES
N = 699909.2128
E = 1736383.1291

NCDOT BASELINE STATION "BL-103"
LOCALIZED PROJECT COORDINATES
N = 700877.4950
E = 1736137.2086



- NOTES:
- THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOHPRECONSTRUCT/HIGHWAYLOCATION/PROJECT](http://www.ncdot.org/DOHPRECONSTRUCT/HIGHWAYLOCATION/PROJECT)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 B4609_LS_CONTROL.TXT
 SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
 - INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
 PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
 NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B3686-1"
 WITH NAD 83/86 STATE PLANE GRID COORDINATES OF
 NORTHING: 701455.4901(FT) EASTING: 1733351.2938(FT)
 ELEVATION: 570.327(FT)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999851100
 THE N. C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3686-1" TO -L- STATION 10+30.00 IS
 S66°31'00.9"E 3190.88'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NGVD 29

NOTE: DRAWING NOT TO SCALE

6/2/99
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6/22/99

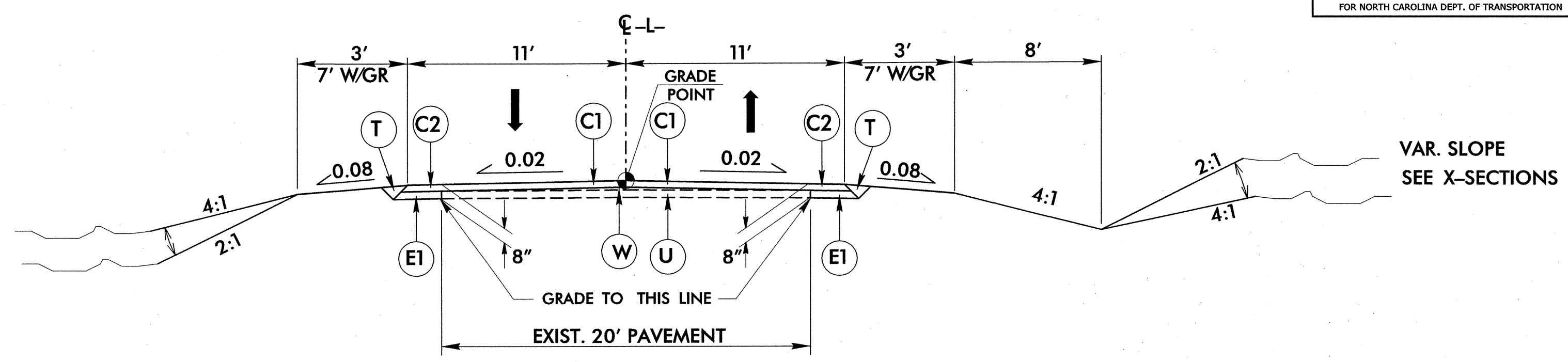
PLANS PREPARED BY:
PARSONS
 RALEIGH, NORTH CAROLINA, (919) 854-1346
 NC LICENSE NO. F-0246
 FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

PROJECT REFERENCE NO. B-4609	SHEET NO. 2
ROADWAY DESIGN ENGINEER TIMOTHY D. GOING SEAL 037874	PAVEMENT DESIGN ENGINEER GARY S. MORRISON SEAL 22888 9/23/13

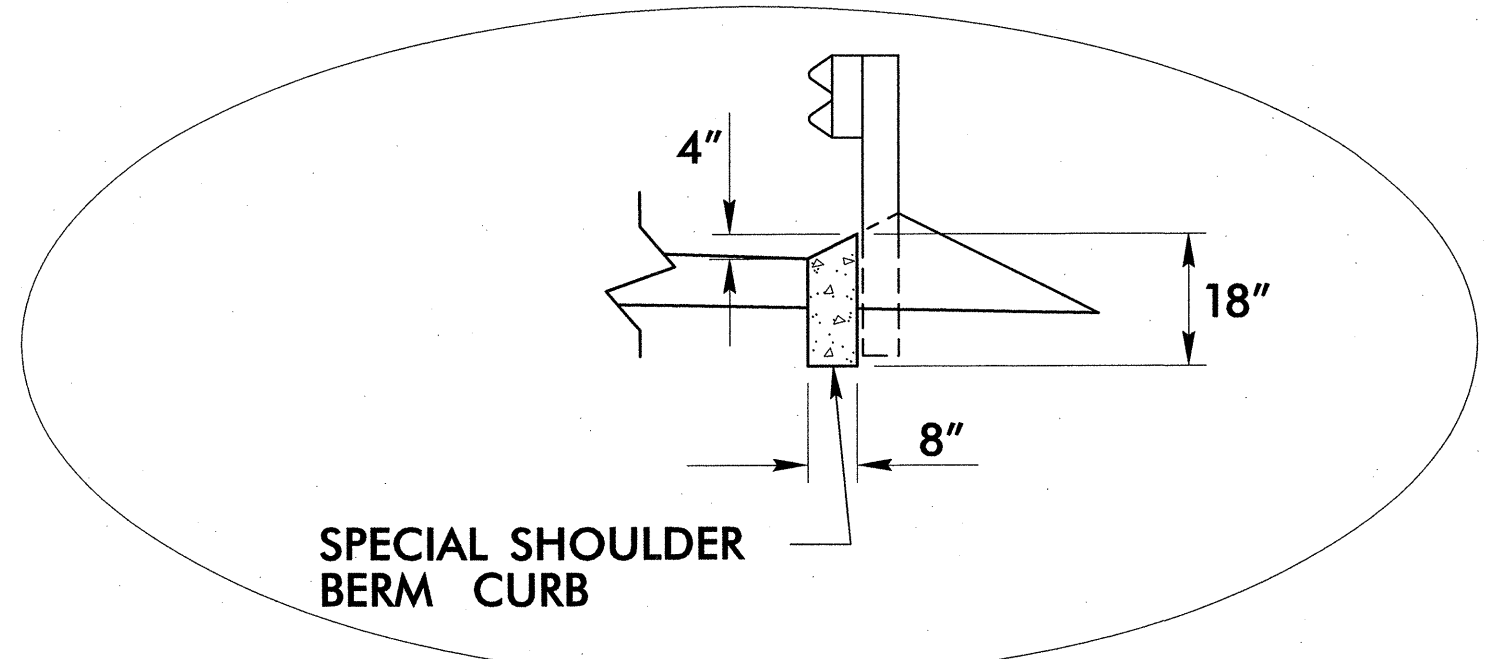
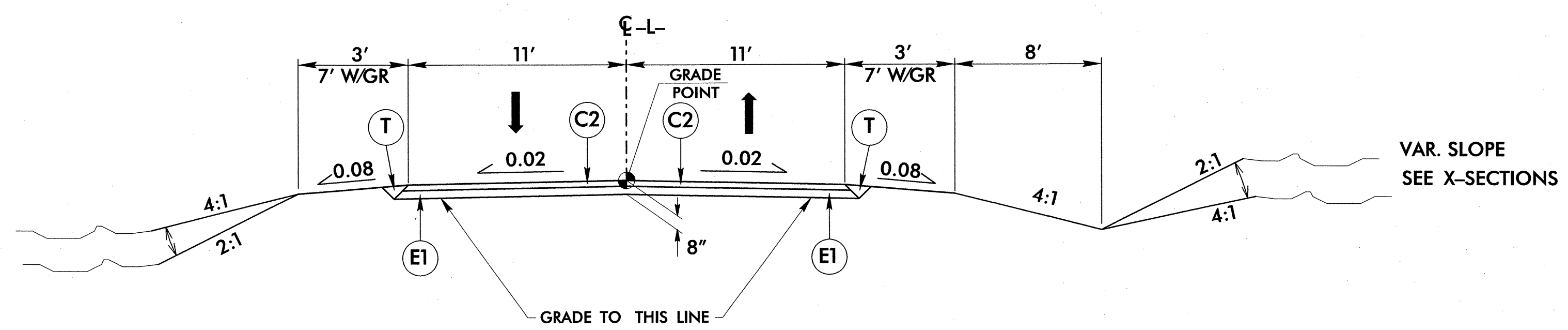
PAVEMENT SCHEDULE FINAL DESIGN	
C1	PROP. APPROX. 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD.
C2	PROP. APPROX. 2 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 1 1/2" IN DEPTH.
E1	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5 1/2" IN DEPTH.
J1	PROP. 6" AGGREGATE BASE COURSE.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL THIS SHEET.)

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

VAR. SLOPE
SEE X-SECTIONS



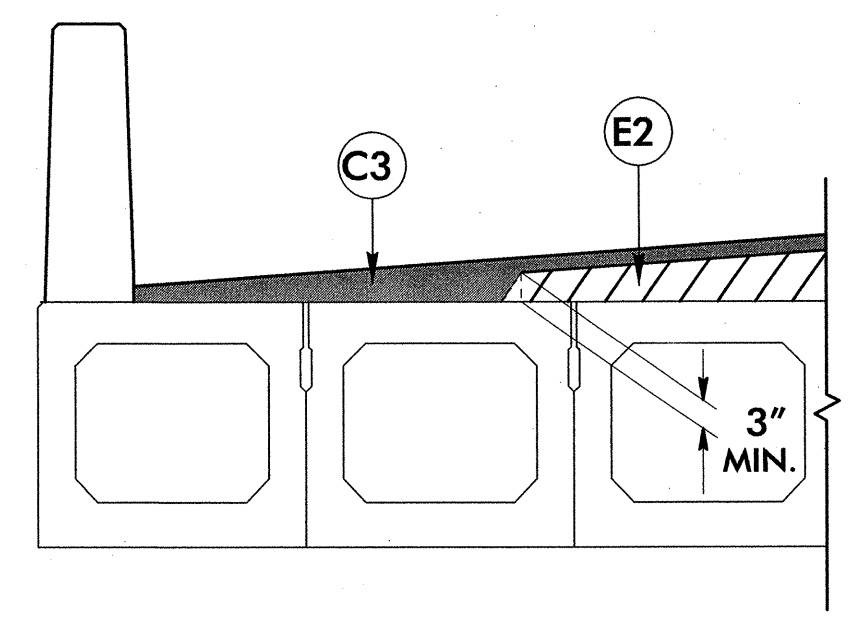
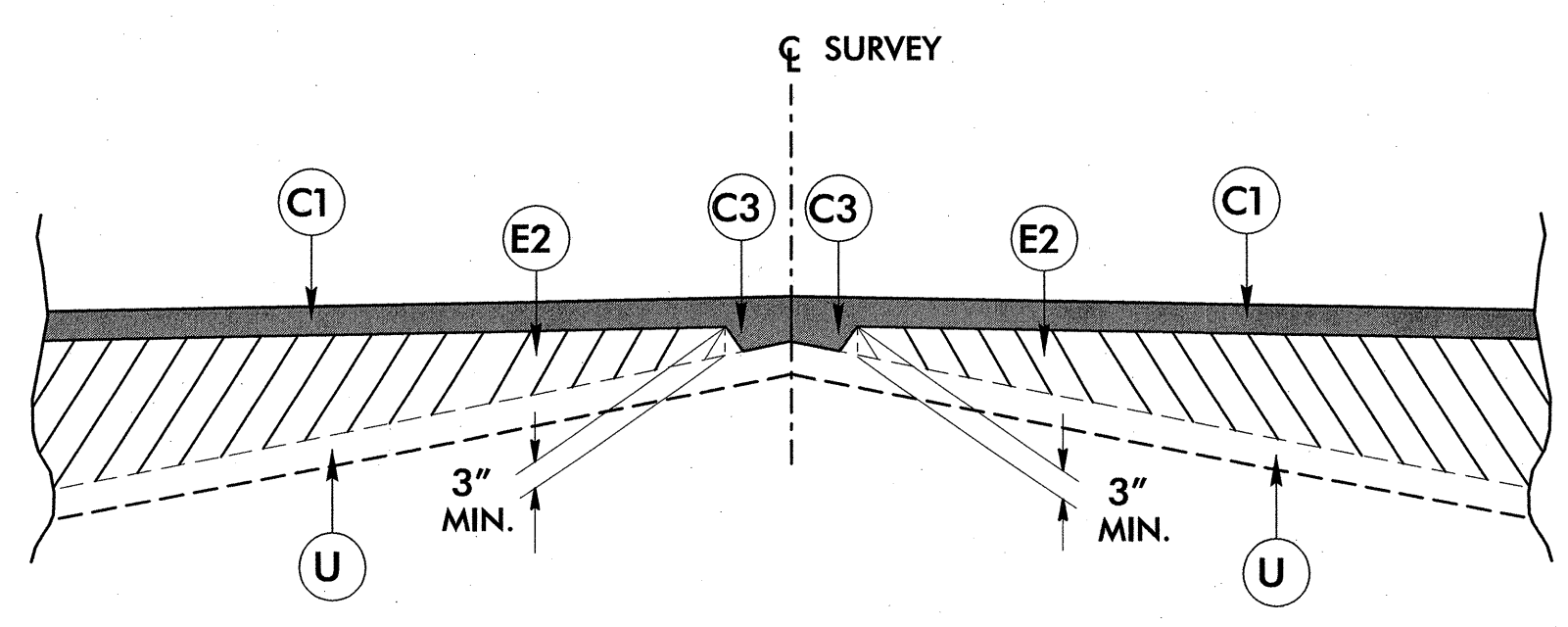
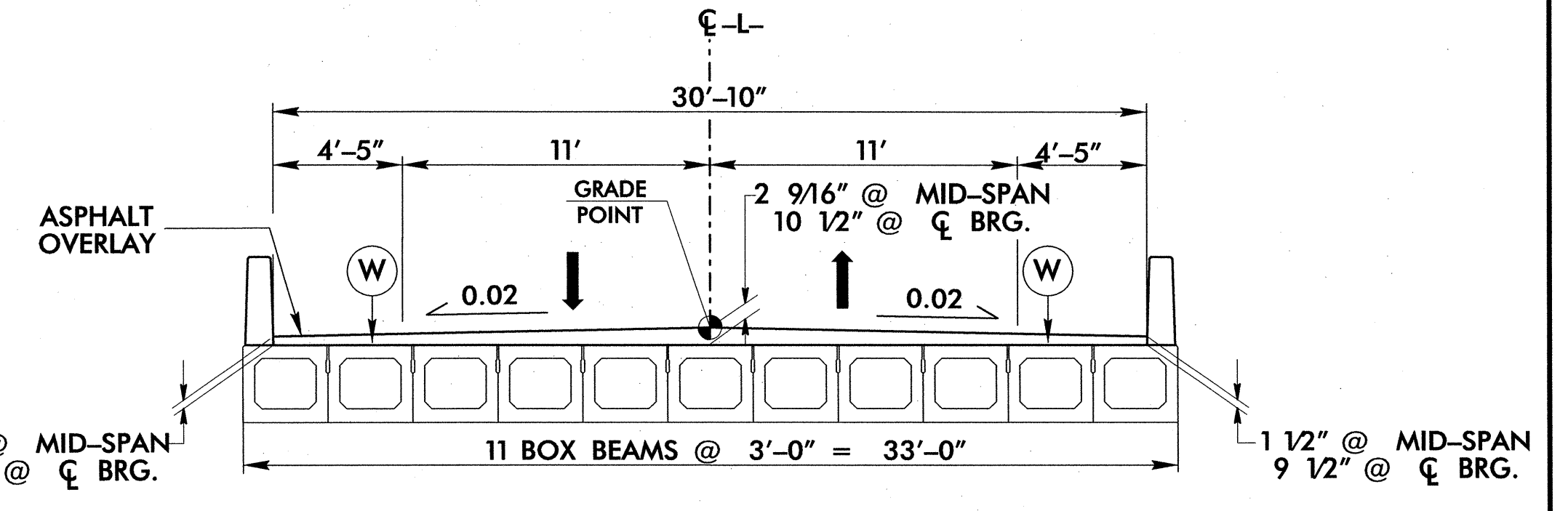
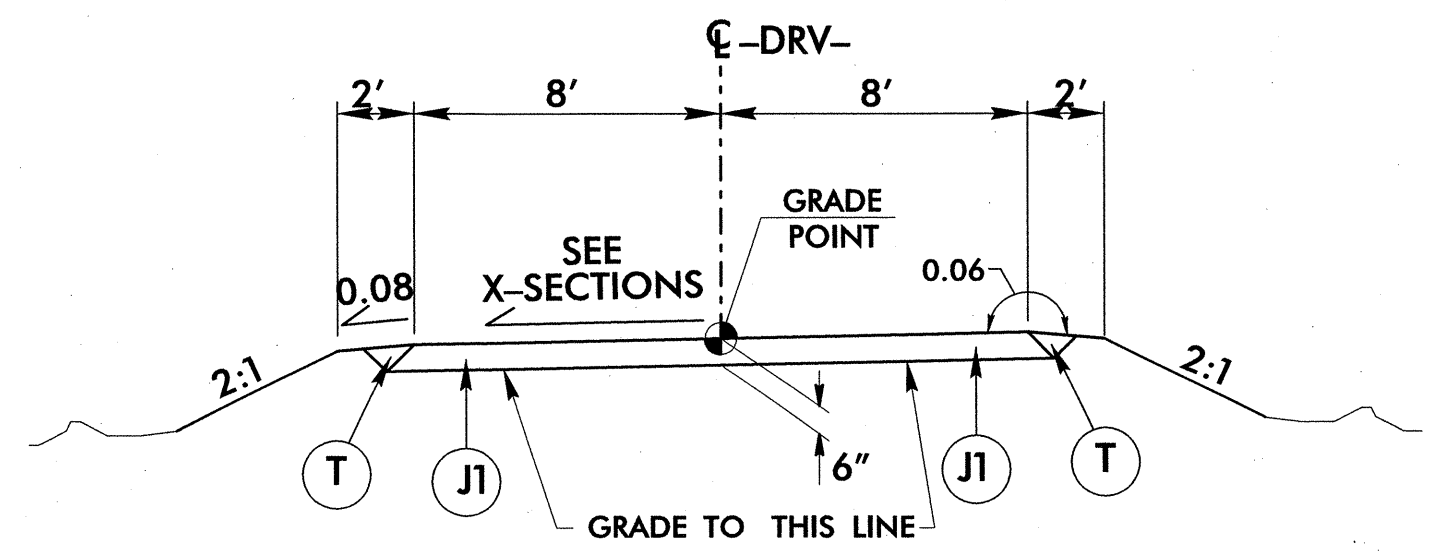
VAR. SLOPE
SEE X-SECTIONS



DETAIL 'A'

USE DETAIL 'A' IN CONJUNCTION WITH T.S. NO. 2
 -L- STA. 13+46.19 (END APPROACH SLAB) TO -L- STA. 13+53.96 LT
 -L- STA. 13+46.19 (END APPROACH SLAB) TO -L- STA. 13+53.96 RT

ROADWAY TYPICAL SECTION NO. 3
 -DRV- STA. 10+23.00 TO STA. 11+00.00

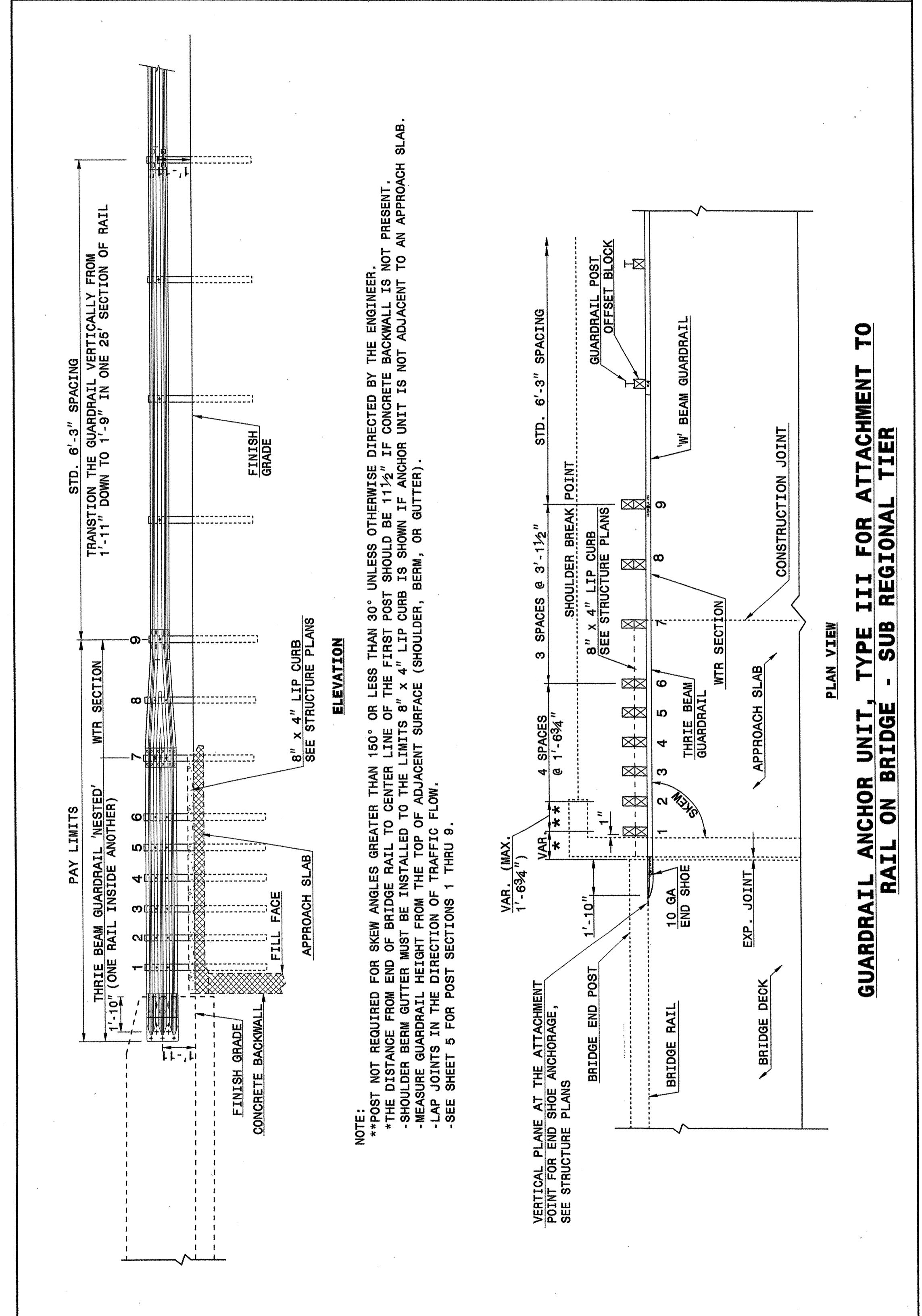


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STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
RAIL ON BRIDGE - SUB REGIONAL TIER
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO

SHEET 2 OF 7
862d03



STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

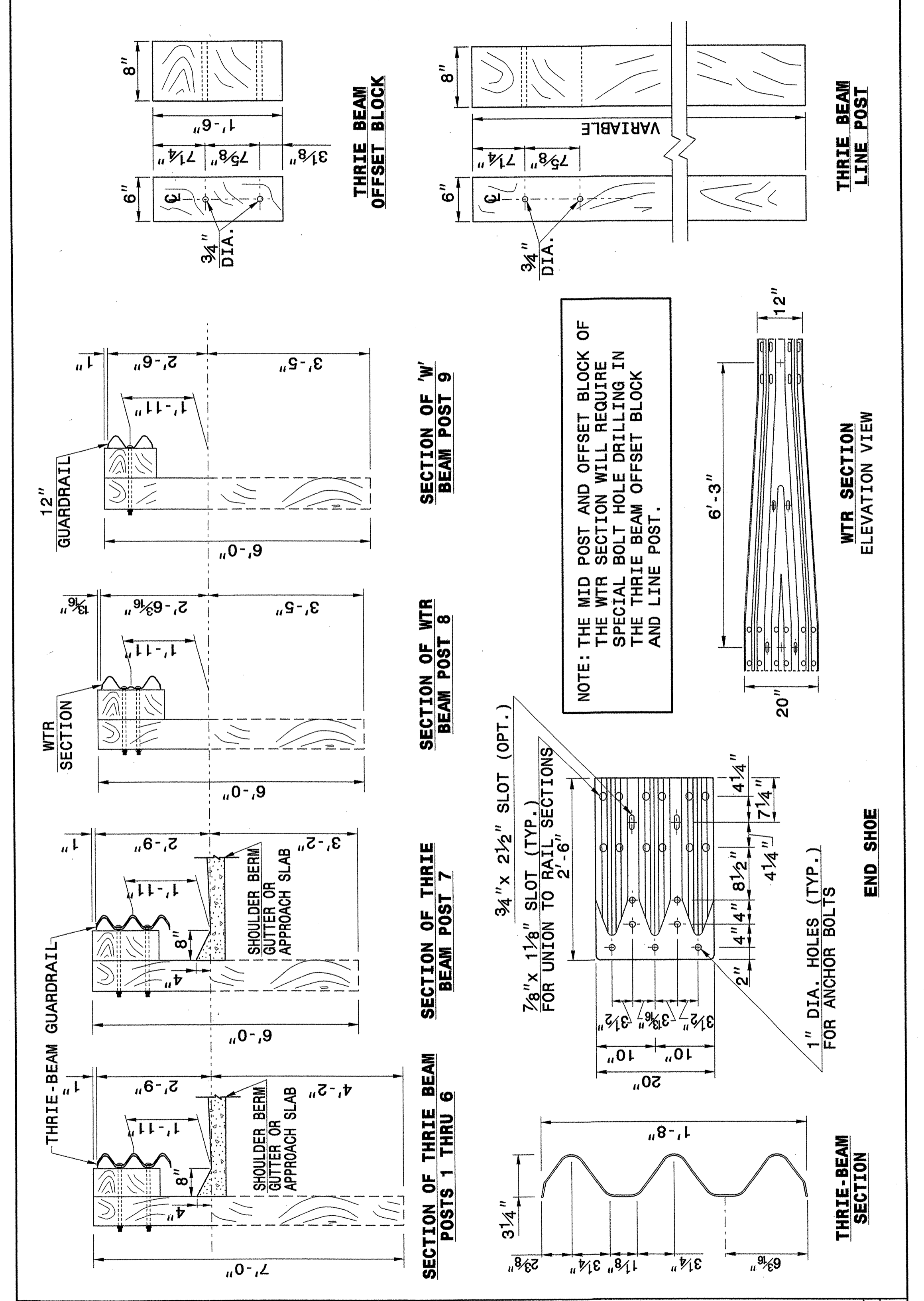
ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
862d03

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
RAIL ON BRIDGE - SUB REGIONAL TIER
GUARDRAIL ANCHOR UNIT, TYPE III

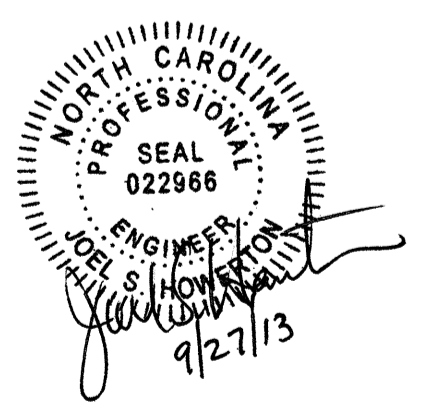
SHEET 3 OF 7
862d03



STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III

SHEET 3 OF 7
862d03



CONTRACT STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: J HOWERTON DATE: 06-22-12
MODIFIED BY: DATE:
CHECKED BY: DATE: 11/13/12
FILE SPEC.:

*****SYTIME*****
*****PRINER*****

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C203282														
ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	2367000000-N	840	2	EA	FRAME WITH TWO GRATES, STD 840.29	6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
0030000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (12+91.50)	2556000000-E	846	40	LF	SHOULDER BERM GUTTER	6024000000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
0043000000-N	226	Lump Sum		GRADING	2752000000-E	SP	20	LF	GENERIC PAVING ITEM SPECIAL SHOULDER BERM CURB	6029000000-E	SP	100	LF	SAFETY FENCE
0050000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING	3030000000-E	862	75	LF	STEEL BM GUARDRAIL	6030000000-E	1630	130	CY	SILT EXCAVATION
0057000000-E	226	200	CY	UNDERCUT EXCAVATION	3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS	6036000000-E	1631	1,800	SY	MATTING FOR EROSION CONTROL
0134000000-E	240	60	CY	DRAINAGE DITCH EXCAVATION	3215000000-N	862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE III	6037000000-E	SP	125	SY	COIR FIBER MAT
0195000000-E	265	200	CY	SELECT GRANULAR MATERIAL	3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	6042000000-E	1632	200	LF	1/4" HARDWARE CLOTH
0196000000-E	270	500	SY	GEOTEXTILE FOR SOIL STABILIZATION	3628000000-E	876	70	TON	RIP RAP, CLASS 1	6071012000-E	SP	60	LF	COIR FIBER WATTLE
0318000000-E	300	10	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	3649000000-E	876	5	TON	RIP RAP, CLASS B	6071020000-E	SP	45	LB	POLYACRYLAMIDE (PAM)
0320000000-E	300	30	SY	FOUNDATION CONDITIONING GEOTEXTILE	3656000000-E	876	595	SY	GEOTEXTILE FOR DRAINAGE	6084000000-E	1660	1	ACR	SEEDING & MULCHING
0335200000-E	305	16	LF	15" DRAINAGE PIPE	4072000000-E	903	78	LF	SUPPORTS, 3-LB STEEL U-CHANNEL	6087000000-E	1660	0.4	ACR	MOWING
0335850000-E	305	2	EA	*** DRAINAGE PIPE ELBOWS (15")	4096000000-N	904	2	EA	SIGN ERECTION, TYPE D	6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
0343000000-E	310	36	LF	15" SIDE DRAIN PIPE	4116100000-N	904	1	EA	SIGN ERECTION, RELOCATE, TYPE **** (GROUND MOUNTED) (E)	6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
0448200000-E	310	28	LF	15" RC PIPE CULVERTS, CLASS IV	4155000000-N	907	6	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	6096000000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
0995000000-E	340	25	LF	PIPE REMOVAL	4400000000-E	1110	371	SF	WORK ZONE SIGNS (STATIONARY)	6108000000-E	1665	0.5	TON	FERTILIZER TOPDRESSING
1099500000-E	505	100	CY	SHALLOW UNDERCUT	4410000000-E	1110	94	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)	6114500000-N	1667	10	MHR	SPECIALIZED HAND MOWING
1099700000-E	505	200	TON	CLASS IV SUBGRADE STABILIZATION	4445000000-E	1145	80	LF	BARRICADES (TYPE III)	6117000000-N	SP	18	EA	RESPONSE FOR EROSION CONTROL
1121000000-E	520	50	TON	AGGREGATE BASE COURSE	4810000000-E	1205	6,560	LF	PAINT PAVEMENT MARKING LINES (4")					
1220000000-E	545	20	TON	INCIDENTAL STONE BASE	6000000000-E	1605	465	LF	TEMPORARY SILT FENCE					
1330000000-E	607	110	SY	INCIDENTAL MILLING	6006000000-E	1610	150	TON	STONE FOR EROSION CONTROL, CLASS A					
1489000000-E	610	260	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	6009000000-E	1610	225	TON	STONE FOR EROSION CONTROL, CLASS B					
1525000000-E	610	180	TON	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A	6012000000-E	1610	95	TON	SEDIMENT CONTROL STONE					
1575000000-E	620	25	TON	ASPHALT BINDER FOR PLANT MIX	6015000000-E	1615	1	ACR	TEMPORARY MULCHING					
2000000000-N	806	6	EA	RIGHT OF WAY MARKERS	6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING					
2286000000-N	840	2	EA	MASONRY DRAINAGE STRUCTURES										

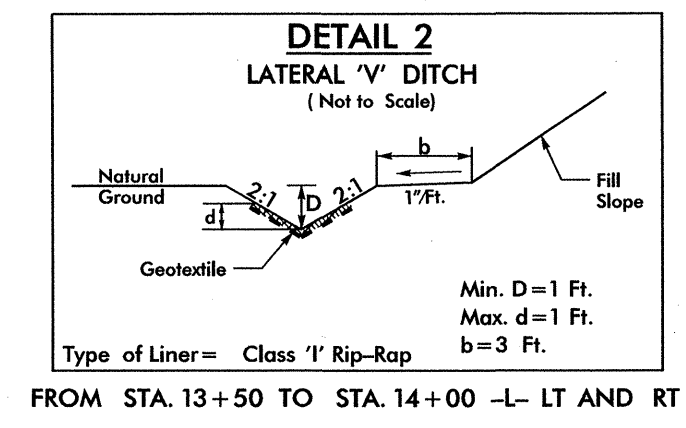
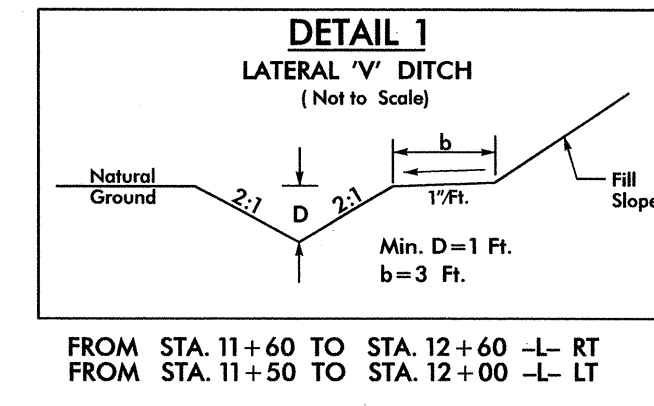
5/28/99

23-SEP-2013 11:58 AM
C:\Users\jgibson\Documents\Projects\B-4609_Rd\psh_03.dgn

8/17/99

-DRV-
 PI Sta 10+57.09
 $\Delta = 42^\circ 34' 03.0''$ (LT)
 $D = 95^\circ 29' 34.7''$
 $L = 44.58'$
 $T = 23.37'$
 $R = 60.00'$

-L-
 PI Sta 13+69.62
 $\Delta = 0^\circ 23' 25.2''$ (RT)
 $D = 1^\circ 30' 00.0''$
 $L = 26.02'$
 $T = 13.01'$
 $R = 3,819.72'$
 S.E. = SEE PLANS
 RO = SEE PLANS



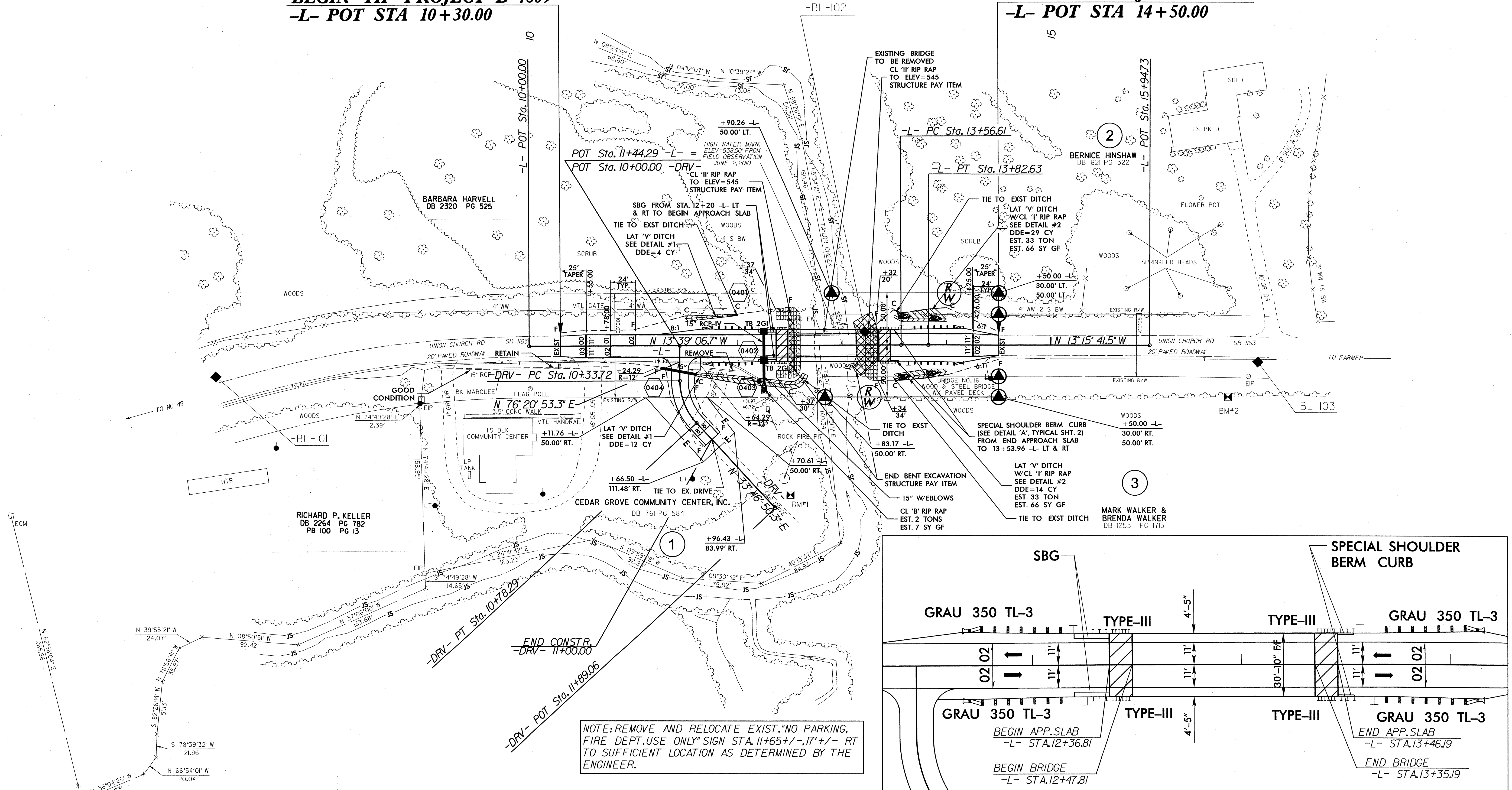
PLANS PREPARED BY:
PARSONS
 RALEIGH, NORTH CAROLINA, (919) 854-1346
 NC LICENSE NO. F-0246
 FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

SUNGATE DESIGN GROUP, P.A.
 915 JONES FRANKLIN ROAD
 RALEIGH, NORTH CAROLINA 27606
 TEL: (919) 885-2241 FAX: (919) 885-9558
 ENG FIRM LICENSE NO. C-890

PROJECT REFERENCE NO. B-4609	SHEET NO. 4
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	SEAL 037874 JUDITH D. GOING 9-23-15
	SEAL 9334 HENRY WELLS 9-2-15

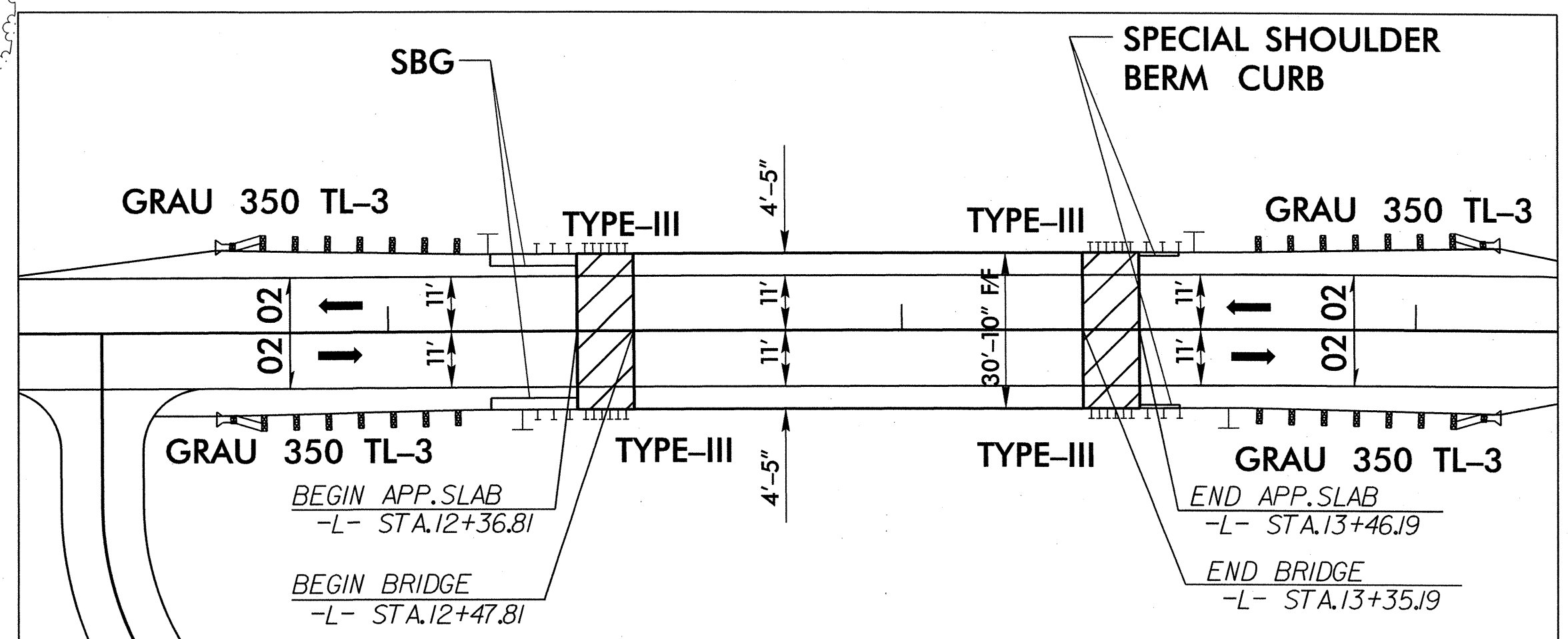
BEGIN TIP PROJECT B-4609
-L- POT STA 10+30.00

END TIP PROJECT B-4609
-L- POT STA 14+50.00



NOTE: REMOVE AND RELOCATE EXIST. NO PARKING, FIRE DEPT. USE ONLY SIGN STA. 11+65+/-, 17+/- RT TO SUFFICIENT LOCATION AS DETERMINED BY THE ENGINEER.

FOR -L- & -DRV- PROFILES SEE SHEET 5
 FOR STRUCTURE PLANS SEE SHEETS S-1 THROUGH S-18



SKETCH SHOWING BRIDGE/PAVEMENT RELATIONSHIP
 NOT TO SCALE

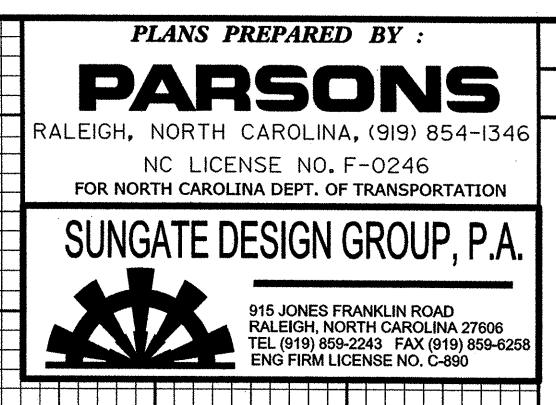
24-SEP-2013 09:01
 \\15616661\Projects\B-4609_Rdwy_psh_04.dgn
 \$\$\$\$SUNGATEDESIGNGROUP\$\$\$\$

5/14/99

BM #1 ELEV=544.07'
RR-SPIKE IN BASE OF
18IN HICKORY TREE
-L- STA. 12+50.00 (143' RT)

PROPOSED SINGLE SPAN BOX BEAM
1 @ 87'-4 1/2"
C STA. 12+91.50
DEPTH = 33"
SKEW = 90°

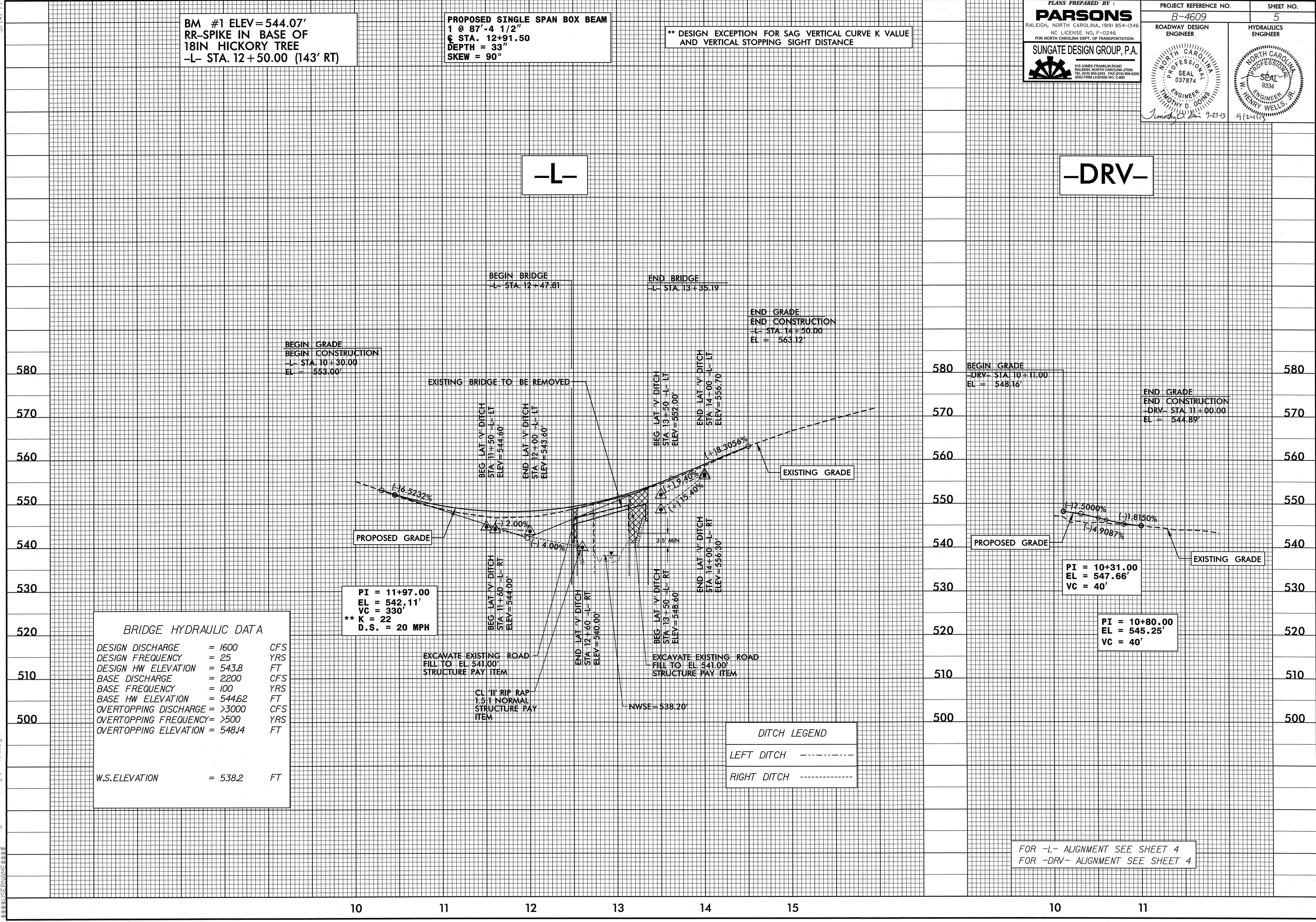
** DESIGN EXCEPTION FOR SAG VERTICAL CURVE K VALUE
AND VERTICAL STOPPING SIGHT DISTANCE



PROJECT REFERENCE NO. B-4609 SHEET NO. 5
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
Professional Engineer seals for North Carolina.

-L-

-DRV-



BRIDGE HYDRAULIC DATA

DESIGN DISCHARGE	= 1600	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 543.8	FT
BASE DISCHARGE	= 2200	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 544.62	FT
OVERTOPPING DISCHARGE	= >3000	CFS
OVERTOPPING FREQUENCY	= >500	YRS
OVERTOPPING ELEVATION	= 548.14	FT
W.S. ELEVATION	= 538.2	FT

PI = 11+97.00
EL = 542.11'
VC = 330'
** K = 22
D.S. = 20 MPH

PI = 10+31.00
EL = 547.66'
VC = 40'

PI = 10+80.00
EL = 545.25'
VC = 40'

DITCH LEGEND

LEFT DITCH	-----
RIGHT DITCH	-----

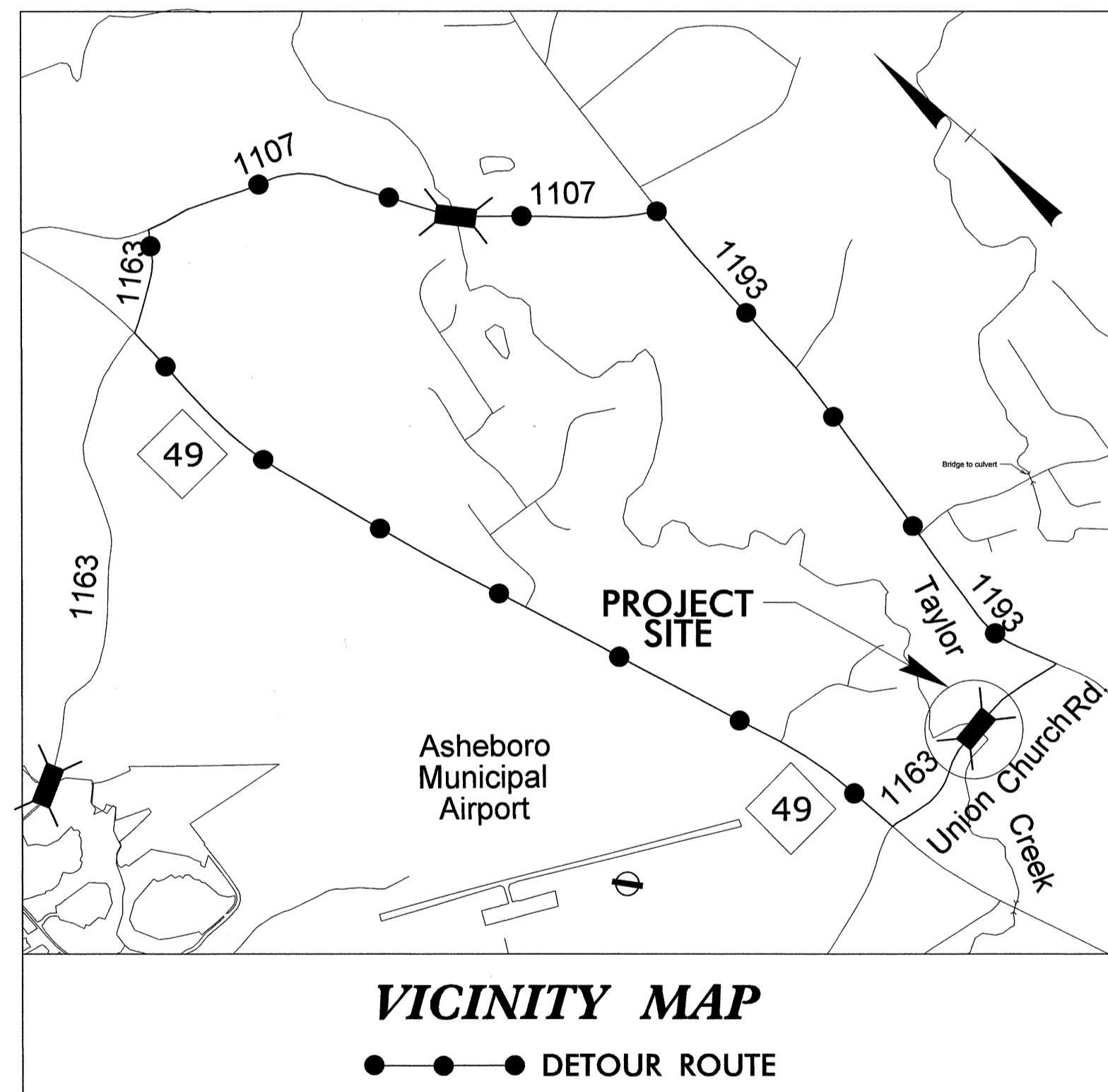
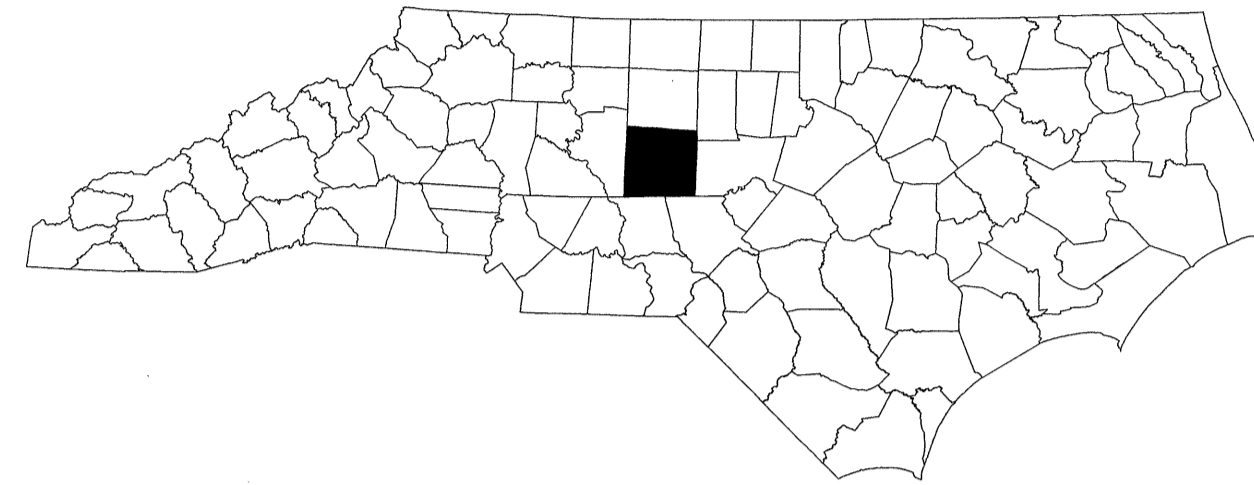
FOR -L- ALIGNMENT SEE SHEET 4
FOR -DRV- ALIGNMENT SEE SHEET 4

24 SEP 2003 09:02
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

RANDOLPH COUNTY



INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-2	SPECIAL SIGN DESIGN DETAIL
TMP-3	OFF-SITE DETOUR AND BARRICADE PLACEMENT

SHEET NO.

TMP-1

B-4609

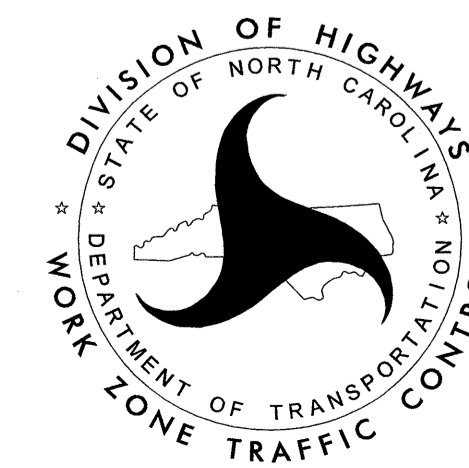
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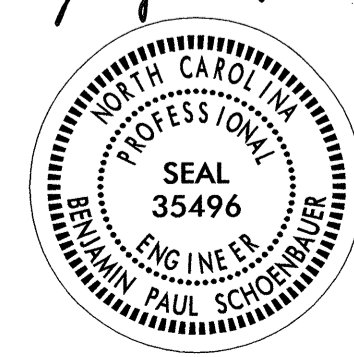
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 713-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
J. ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER
B. SCHOENBAUER, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
S. HASSAN TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: *Ben Schombauer*
DATE: July 17, 2013

SEAL



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE WARNING SIGNS
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

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APPROVED: <i>Ben Schuman</i> DATE: 7/17/13 		<h3>ROADWAY STANDARD DRAWINGS & LEGEND</h3>
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MANAGEMENT STRATEGIES

THE FOLLOWING LISTED STRATEGIES DERIVE FROM DETAILED DESIGN LEVEL ASSESSMENTS OF THE WORK ZONE IMPACTS CONDUCTED DURING THE DEVELOPMENTAL STAGES OF THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED MANAGEMENT STRATEGIES RELATIVE TO THIS TMP ARE AS FOLLOWS:

- FULL ROAD CLOSURE

TRAFFIC TO BE MAINTAINED ON THE FOLLOWING OFF-SITE DETOUR ROUTE THROUGHOUT THE DURATION OF THIS PROJECT.

- NC 49
- SR 1163 (SCIENCE HILL RD.)
- SR 1107 (LASSITER MILL RD.)
- SR 1193 (OLD NC 49)

PHASING

STEP 1: AWAY ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9; AND SHEETS TMP-2 AND TMP-3, COMPLETE THE FOLLOWING:

- A) INSTALL DETOUR AND WARNING SIGNS.
- B) PLACE TYPE III BARRICADES TO CLOSE SR 1163 (UNION CHURCH RD) TO THROUGH TRAFFIC, AND PLACE TRAFFIC ONTO PROPOSED DETOUR.

STEP 2: AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING:

- A) REMOVE EXISTING STRUCTURE NO. 16 AND CONSTRUCT PROPOSED STRUCTURE. SEE ROADWAY AND STRUCTURE PLANS.
- B) CONSTRUCT PROPOSED ROADWAY UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE. SEE ROADWAY PLANS.
- C) PLACE FINAL PAVEMENT MARKINGS AS DIRECTED BY THE ENGINEER.

STEP 3: A) OPEN SR 1163 (UNION CHURCH RD) TO PROPOSED FINAL TRAFFIC PATTERN.

- B) REMOVE ALL REMAINING WORK ZONE TRAFFIC CONTROL DEVICES.

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TRAFFIC PATTERN ALTERATIONS

- A) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- B) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

- C) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

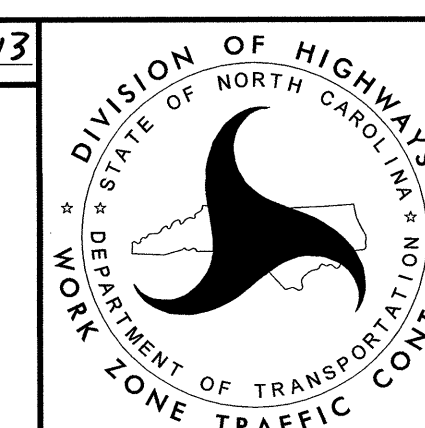
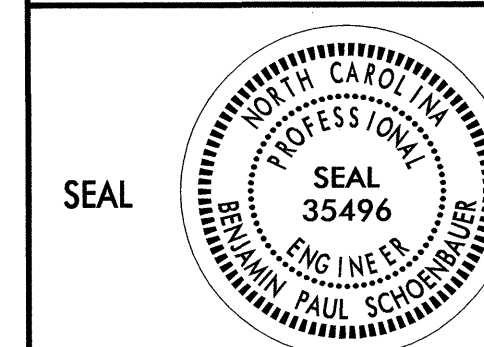
COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

- D) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- E) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- F) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

APPROVED: *Paul Schenker* DATE: 7/17/13

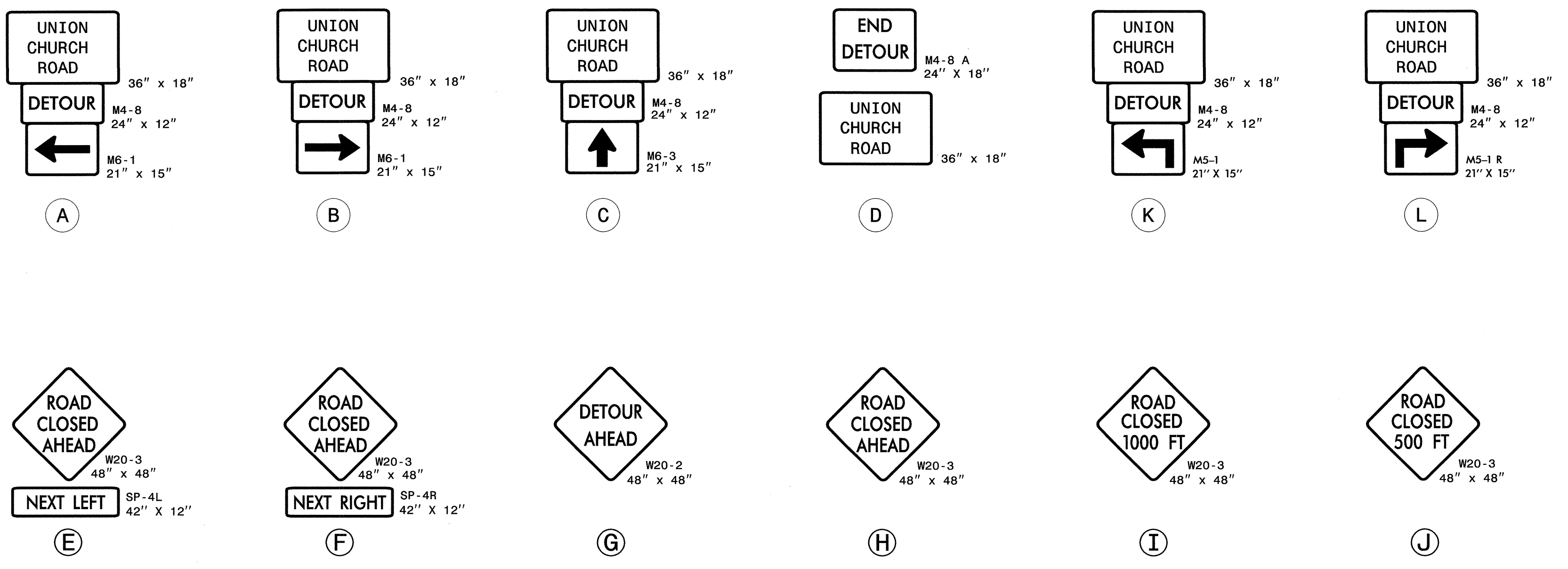
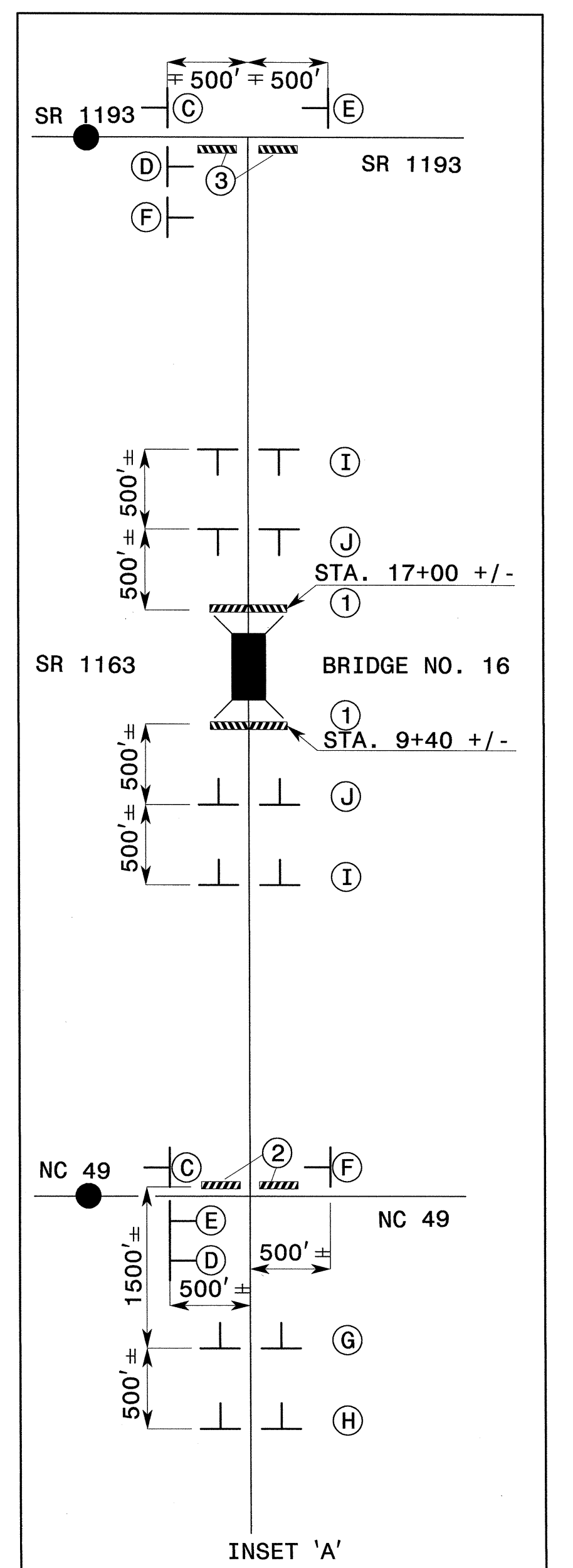
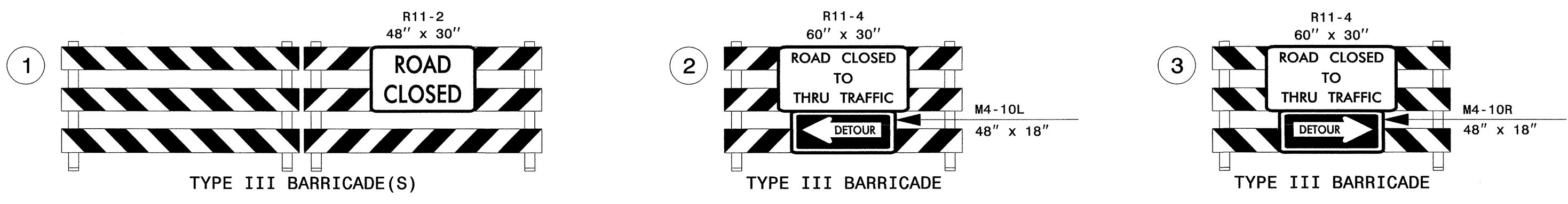
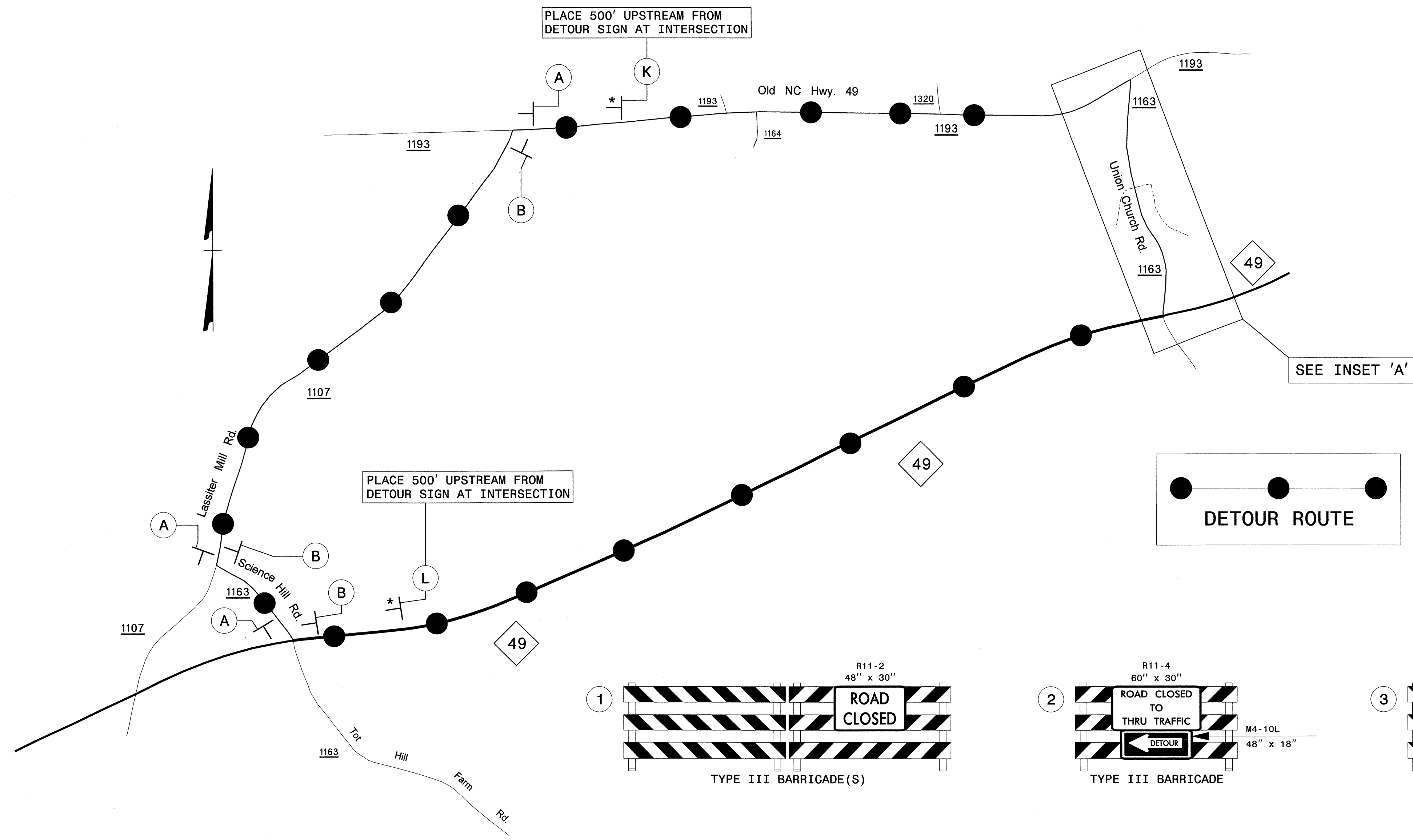


**TRANSPORTATION
OPERATIONS
PLAN**

<p>SIGN NUMBER: SP13101 TYPE: STATIONARY QUANTITY: SEE PLANS SIGN WIDTH: 3'-0" HEIGHT: 1'-6" TOTAL AREA: 4.5 Sq.Ft. BORDER TYPE: INSET RECESS: 0.5" WIDTH: 0.5" RADII: 1.5" NO. Z BARS: LENGTH:</p>	<p>BACKG COLOR: Fluorescent Orange COPY COLOR: Black SYMBO L X Y WID HT MAT'L: 0.080" (2.0 mm) ALUMINUM</p>	<p>DESIGN BY: A. GRADY PROJECT ID: B-4609</p>	<p>CHECKED BY: S. KUNZ DIV: 8</p>	<p>DATE: Jan 24, 2013</p>																																																																																																								
<p>USE NOTES: 1,2 1. Legend and border shall be direct applied black non-reflective sheeting. 2. Background shall be NC GRADE B fluorescent orange retroreflective sheeting.</p>																																																																																																												
<p>Spacing Factor is 1 unless specified otherwise</p>																																																																																																												
<p>LETTER POSITIONS</p> <p style="text-align: center;">Letter spacings are to start of next letter</p> <table border="1"> <thead> <tr> <th></th> <th>U</th> <th>N</th> <th>I</th> <th>O</th> <th>N</th> <th colspan="5"></th> <th>Series/Size Text Length</th> </tr> </thead> <tbody> <tr> <td></td> <td>9.9</td> <td>3.9</td> <td>3.9</td> <td>1.7</td> <td>3.9</td> <td>2.8</td> <td>9.9</td> <td colspan="5"></td> <td>C 2000 16.3</td> </tr> <tr> <td></td> <td></td> <td>C</td> <td>H</td> <td>U</td> <td>R</td> <td>C</td> <td>H</td> <td></td> <td>R</td> <td>D</td> <td colspan="2"></td> </tr> <tr> <td></td> <td>2.7</td> <td>3.8</td> <td>3.9</td> <td>3.9</td> <td>3.6</td> <td>3.8</td> <td>2.8</td> <td>2.5</td> <td>3.6</td> <td>2.8</td> <td>2.7</td> <td>C 2000 30.7</td> </tr> <tr> <td colspan="13"> </td> </tr> <tr> <td colspan="13"> </td> </tr> <tr> <td colspan="13"> </td> </tr> <tr> <td colspan="13"> </td> </tr> </tbody> </table>						U	N	I	O	N						Series/Size Text Length		9.9	3.9	3.9	1.7	3.9	2.8	9.9						C 2000 16.3			C	H	U	R	C	H		R	D				2.7	3.8	3.9	3.9	3.6	3.8	2.8	2.5	3.6	2.8	2.7	C 2000 30.7																																																				
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	9.9	3.9	3.9	1.7	3.9	2.8	9.9						C 2000 16.3																																																																																															
		C	H	U	R	C	H		R	D																																																																																																		
	2.7	3.8	3.9	3.9	3.6	3.8	2.8	2.5	3.6	2.8	2.7	C 2000 30.7																																																																																																
<p>FILENAME: B4609_Sgn_SGN_TC</p> <p style="text-align: right;">NORTH CAROLINA D.O.T. SIGN DETAIL</p>																																																																																																												

7/11/2013 P:\TPT\Projects-B\B4609\TrafficControl\TCP\B-4609_TC_TMP_01.dgn User:sthoisson

<p>APPROVED: <i>[Signature]</i> DATE: 7/11/13</p> <p>SEAL</p>		<p style="text-align: center;">SPECIAL SIGN DESIGN DETAIL</p>
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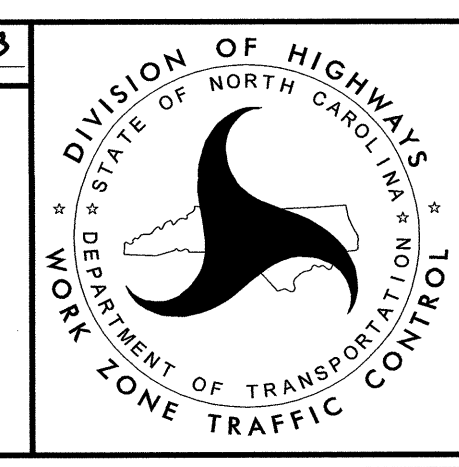


NOTES:
 1. REFER TO ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9 FOR SIGN DISTANCES.
 2. SEE SHEET TMP-2 FOR SIGN DESIGN.
 3. MAINTAIN ACCESS TO ALL DRIVEWAYS FOR PATRONS AND EMERGENCY MANAGEMENT SERVICES.

REFER TO ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9 FOR APPLICABLE NOTES.

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APPROVED: *Ben Schramm* DATE: 7/17/13
 SEAL
 PROFESSIONAL SEAL 35496
 ENGINEER PAUL SCHRAMM



OFF-SITE DETOUR AND BARRICADE PLACEMENT

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

TIP NO. B-4609	SHEET NO. PMP-1
APPROVED: <i>RW</i>	
DATE: 8/21/13	
SEAL	

PAVEMENT MARKING PLAN
RANDOLPH COUNTY

LOCATION: BRIDGE No. 16 OVER TAYLOR CREEK ON SR 1163 (UNION CHURCH ROAD)

T.I.P.: B-4609

CONTRACT: C203282

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
	PAINT (4")
PI	YELLOW DOUBLE CENTER
PA	WHITE EDGELINE

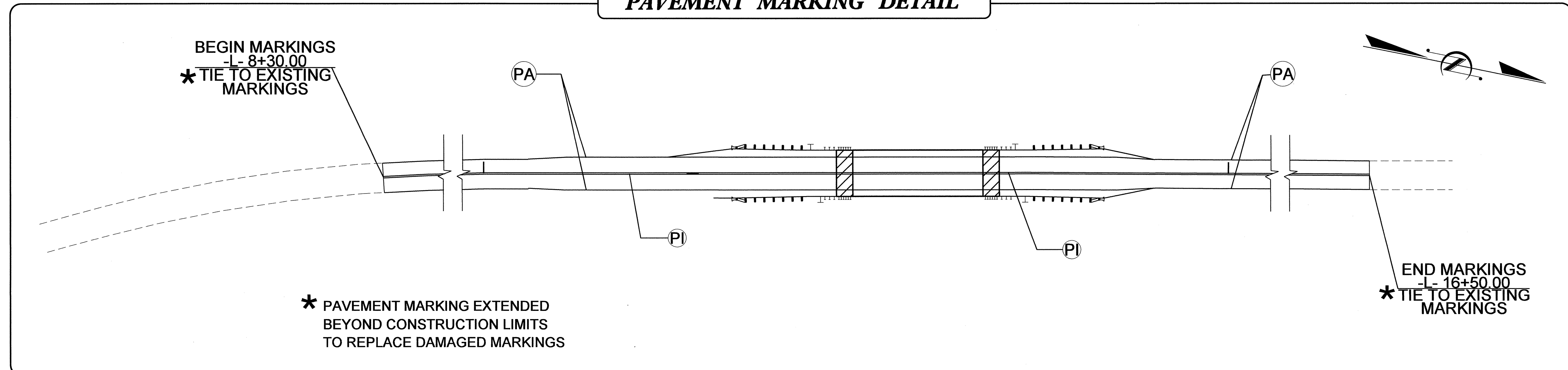
GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

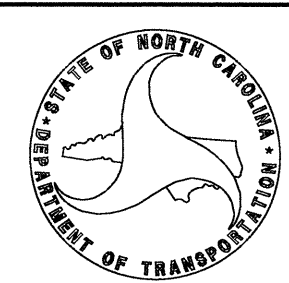
ROAD NAME	MARKING	MARKER
SR 1163	PAINT	NONE
- PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.
- TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.
- MARKERS ARE TO BE PLACED ACCORDING TO THE ROADWAY STANDARD DRAWINGS.

PAVEMENT MARKING DETAIL



PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

SUSAN B. KUNZ SIGNING & DELINEATION REGIONAL ENGINEER
ADAM GRADY SIGNING & DELINEATION PROJECT DESIGN ENGINEER/TECHNICIAN

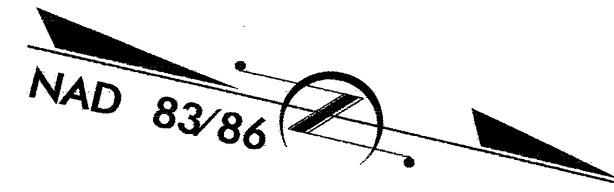


TIP PROJECT: B-4609

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
RANDOLPH COUNTY

LOCATION: BRIDGE NO. 16 OVER TAYLOR CREEK ON SR 1163

TYPE OF WORK: GRADING, DRAINAGE, PAVING AND STRUCTURE

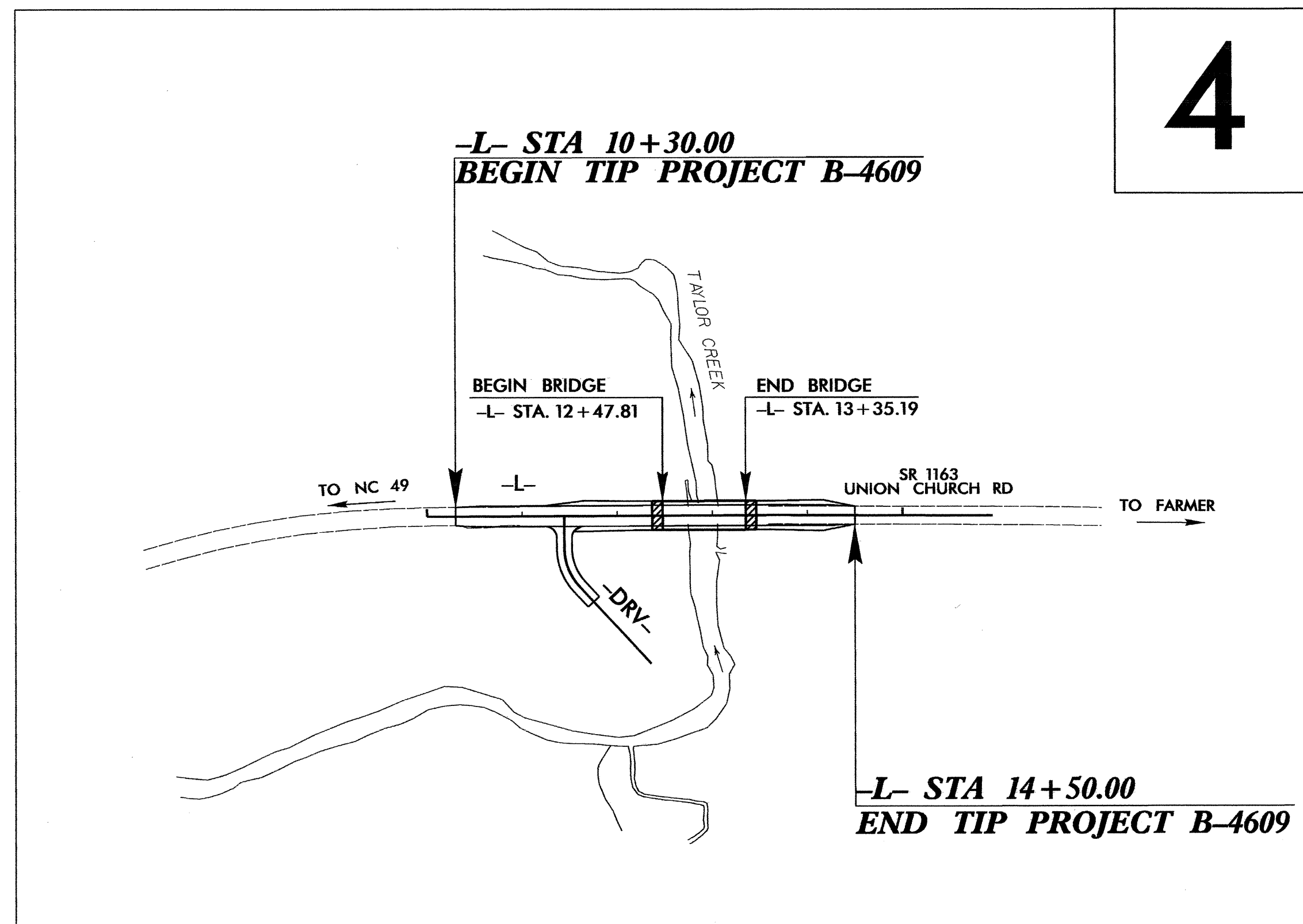


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4609	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

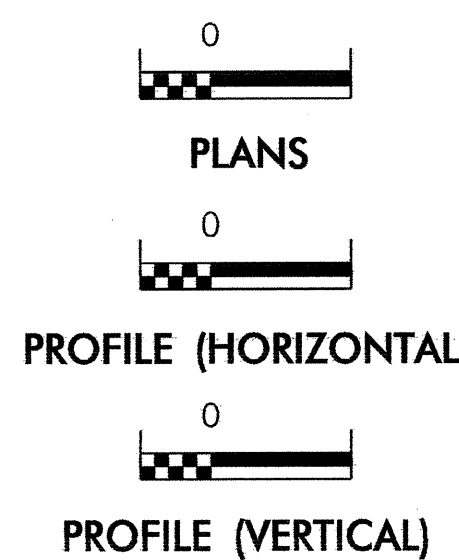
EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III
1606.01	Special Sediment Control Fence	▲▲▲▲
1622.01	Temporary Berms and Slope Drains	▲
1630.02	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	▨
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	▨
1633.02	Temporary Rock Silt Check Type-B	▨
	Wattle / Coir Fiber Wattle	▨
	Wattle / Coir Fiber Wattle with Polyacrylamide (PAM)	▨
1634.01	Temporary Rock Sediment Dam Type-A	▨
1634.02	Temporary Rock Sediment Dam Type-B	▨
1635.01	Rock Pipe Inlet Sediment Trap Type-A	▨
1635.02	Rock Pipe Inlet Sediment Trap Type-B	▨
1630.04	Stilling Basin	▨
1630.06	Special Stilling Basin	▨
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	▨
	Tiered Skimmer Basin	▨
	Infiltration Basin	▨

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.



GRAPHIC SCALE



ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared In the Office of:
ROADSIDE ENVIRONMENTAL UNIT
 1 South Wilmington St.
 Raleigh, NC 27611
2012 STANDARD SPECIFICATIONS

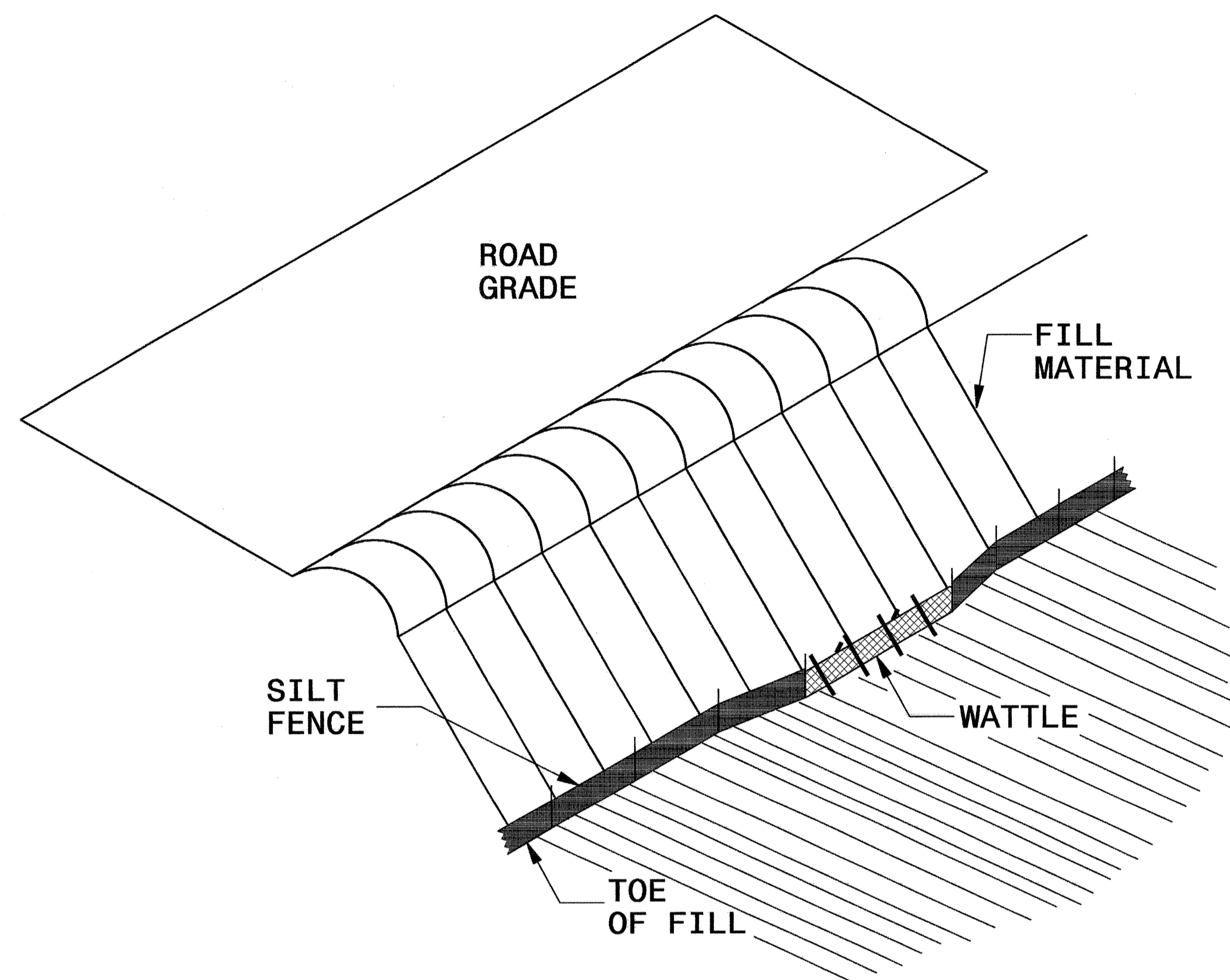
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

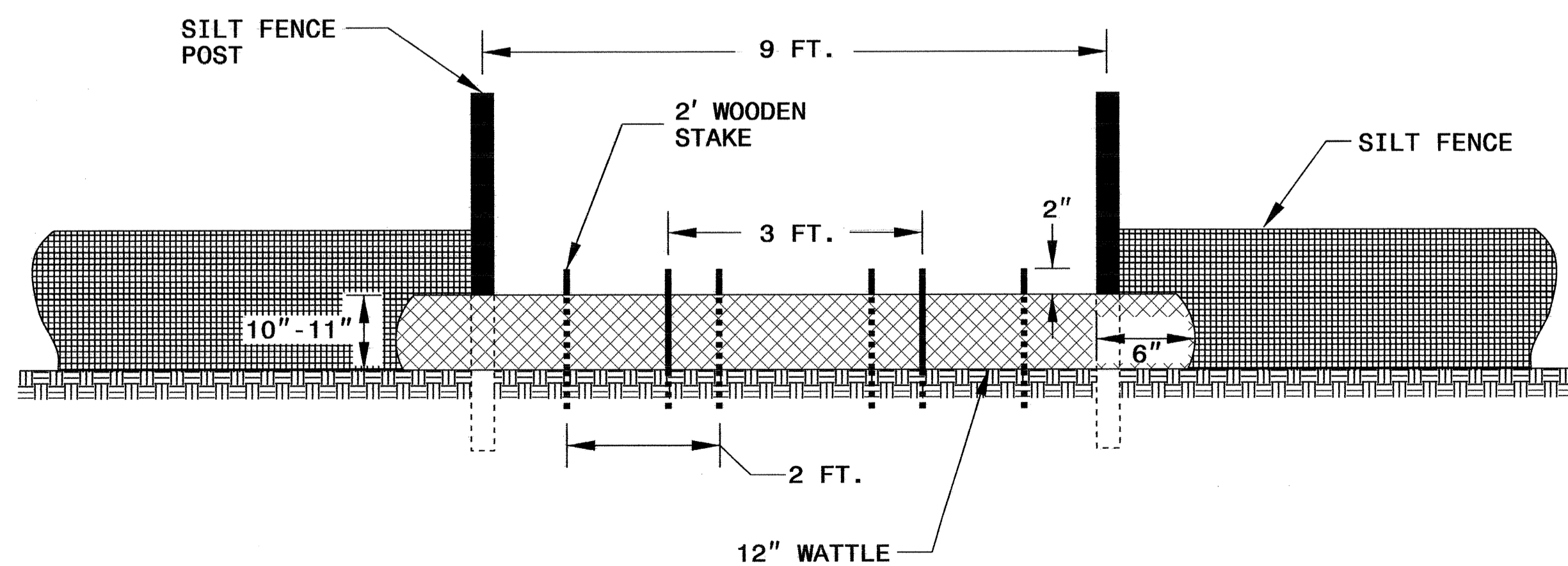
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

SILT FENCE COIR FIBER WATTLE BREAK DETAIL

PROJECT REFERENCE NO. B-4609	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



ISOMETRIC VIEW

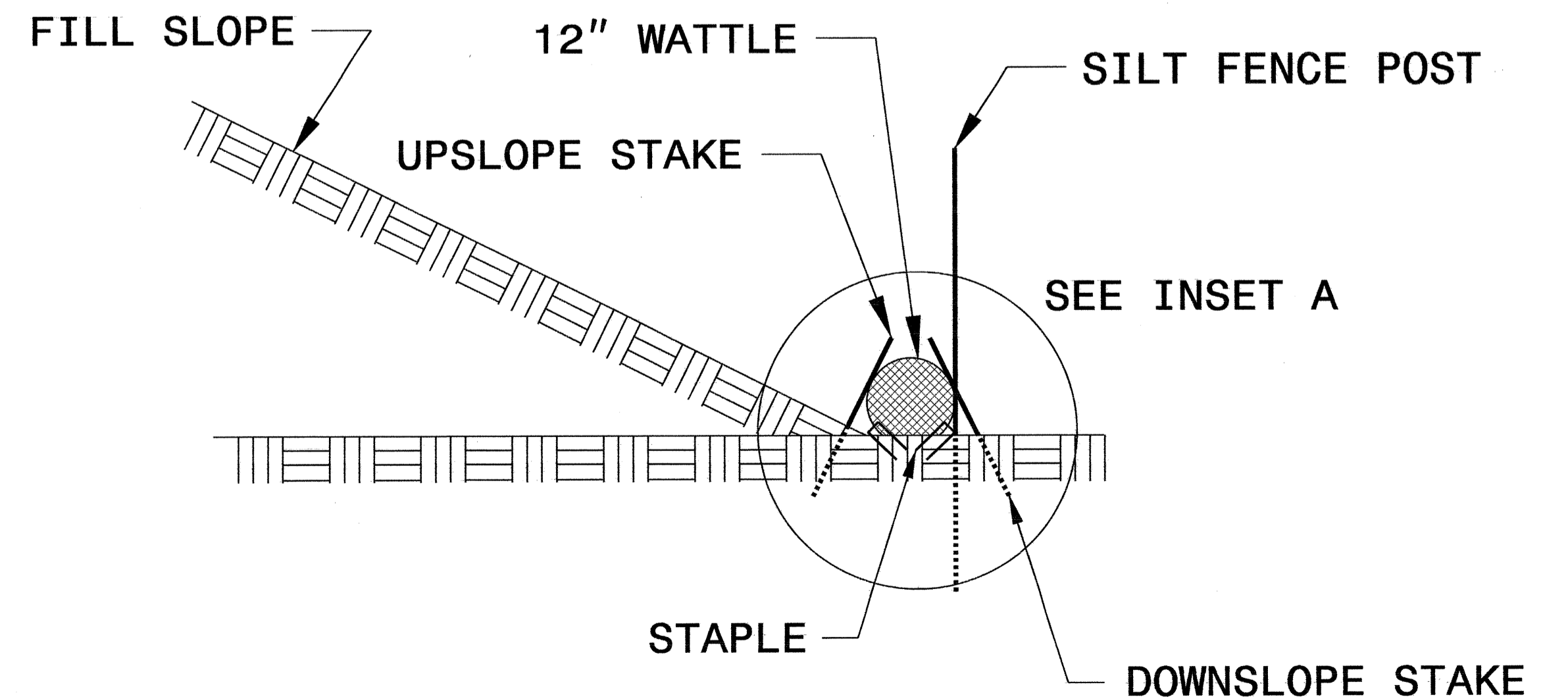
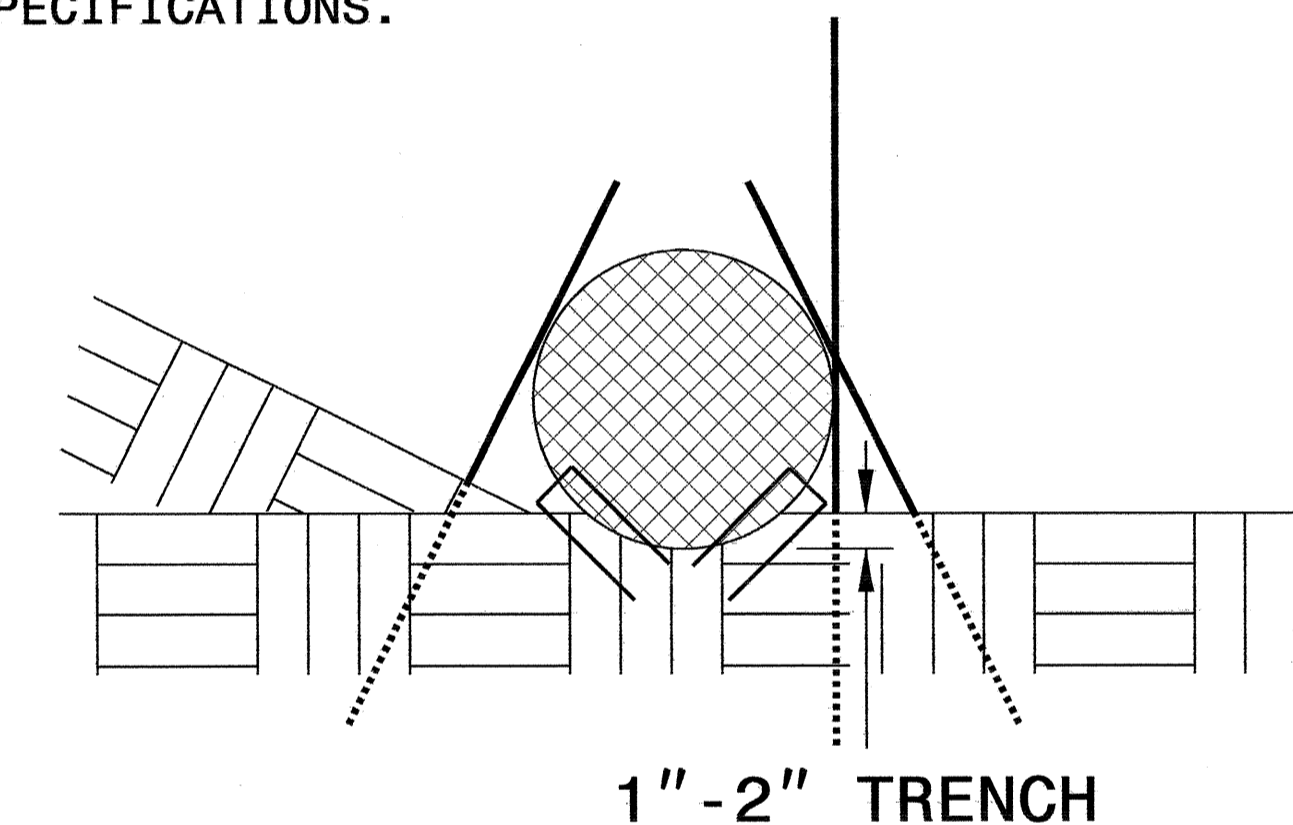


VIEW FROM SLOPE

NOTES:

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

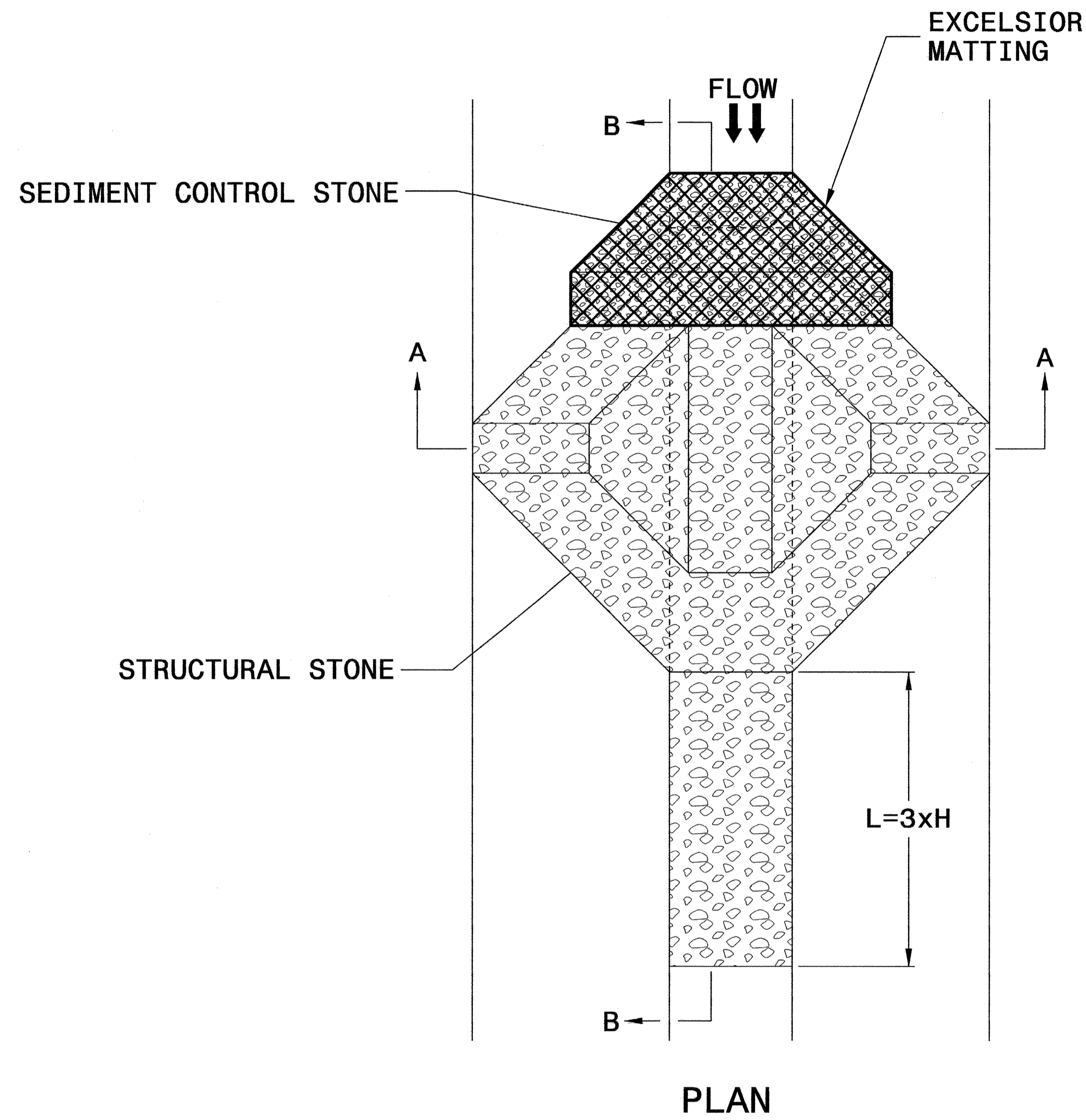
INSET A



SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
B-4609	EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)

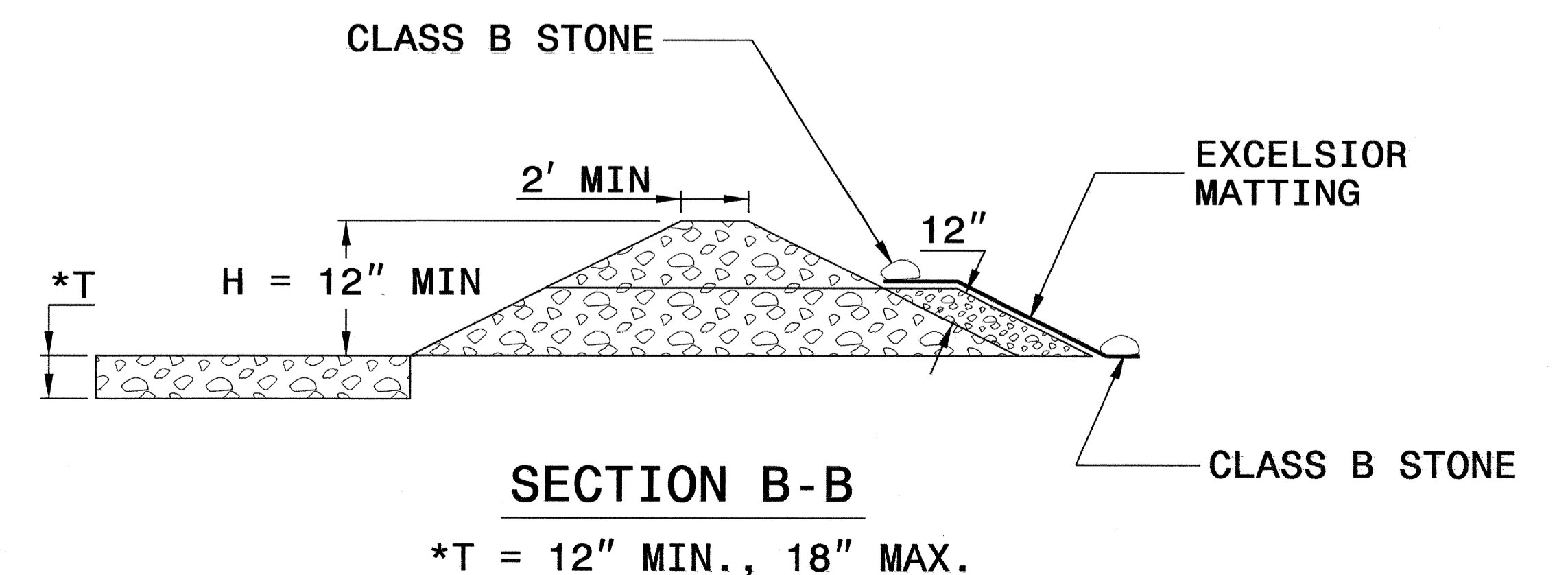
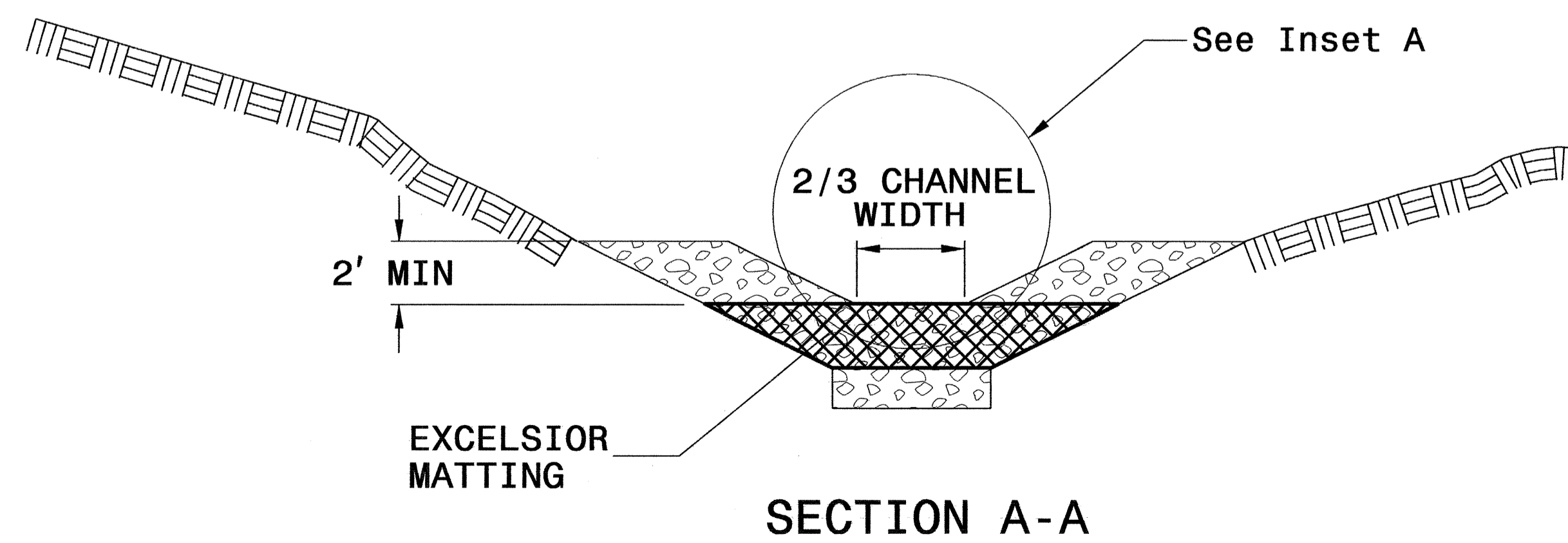
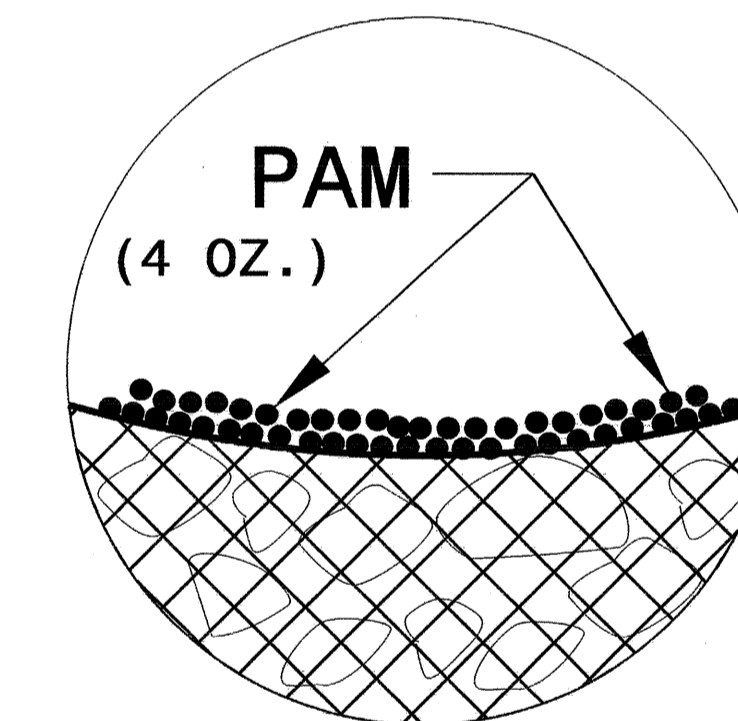


NOTES

USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-4609</i>	SHEET NO. <i>EC-3</i>
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SOIL STABILIZATION TIMEFRAMES

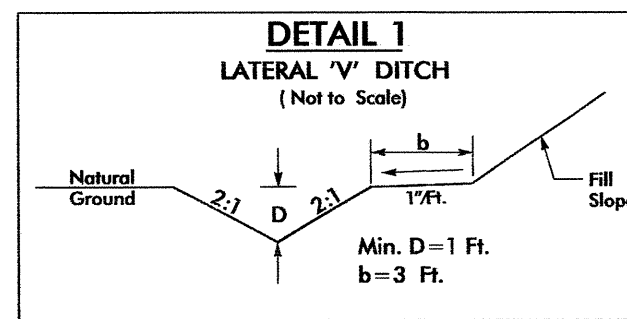
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

8/17/99

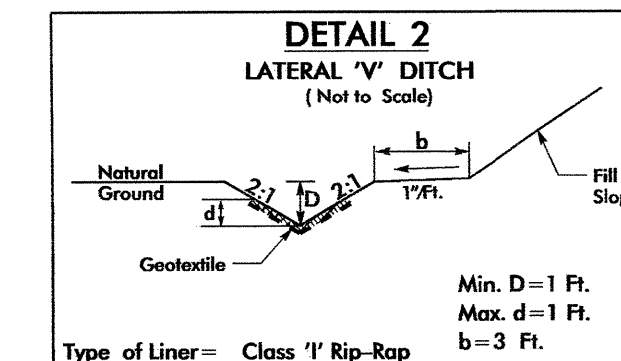
PROJECT REFERENCE NO.	SHEET NO.
B-4609	EC-4/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-DRV-
 PI Sta 10+57.09
 $\Delta = 42^{\circ} 34' 03.0''$ (LT)
 D = 95' 29" 34.7"
 L = 44.58'
 T = 23.37'
 R = 60.00'

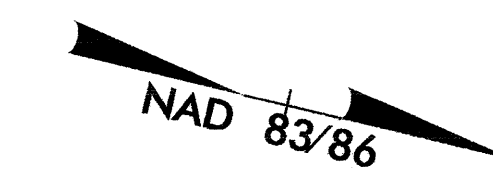
-L-
 PI Sta 13+69.62
 $\Delta = 0^{\circ} 23' 25.2''$ (RT)
 D = 1' 30" 00.0"
 L = 26.02'
 T = 13.01'
 R = 3,819.72'
 S.E. = SEE PLANS
 RO = SEE PLANS



FROM STA. 11+60 TO STA. 12+60 -L- RT
 FROM STA. 11+50 TO STA. 12+00 -L- LT

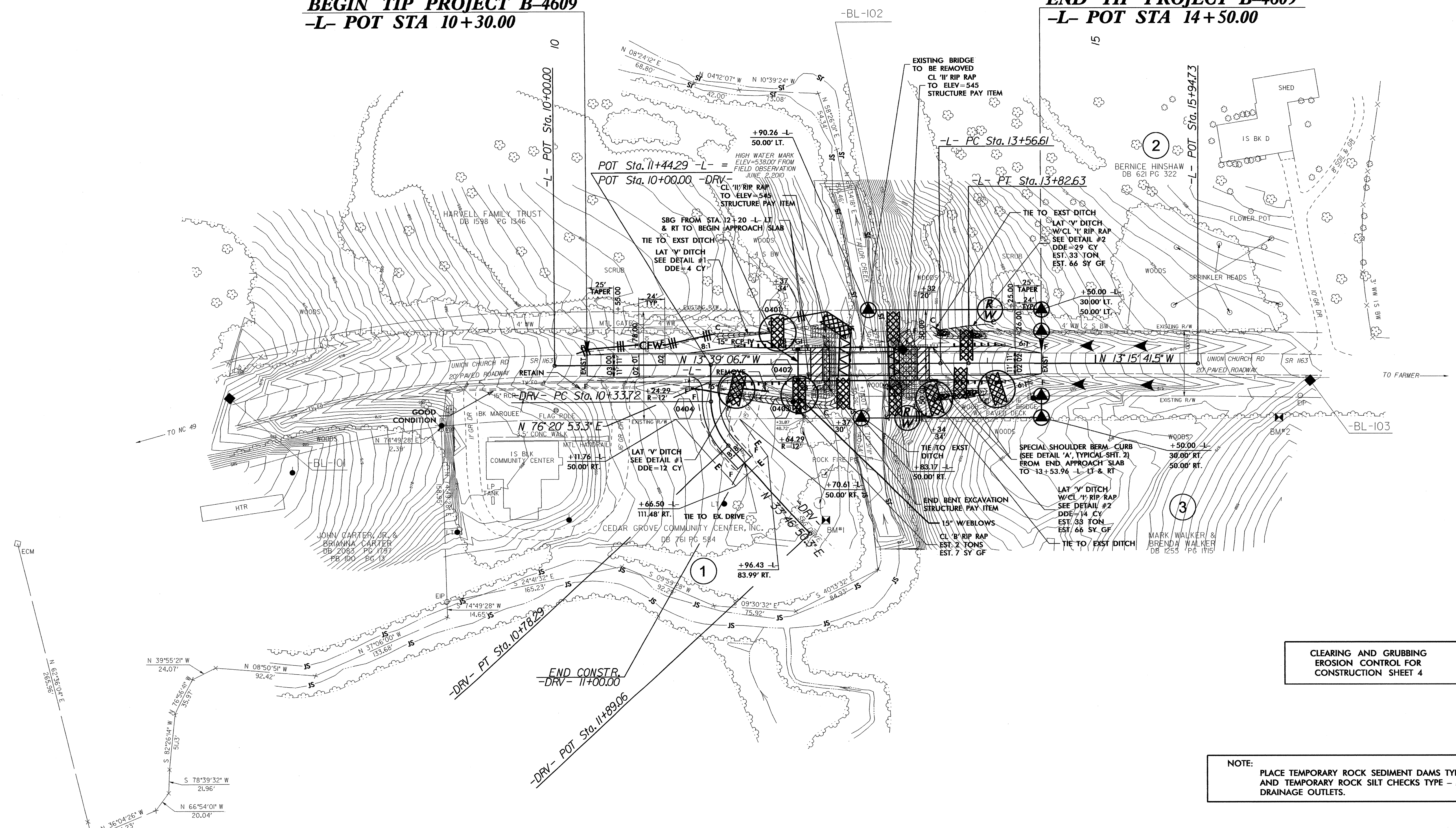


FROM STA. 13+50 TO STA. 14+00 -L- LT AND RT



BEGIN TIP PROJECT B-4609
-L- POT STA 10+30.00

END TIP PROJECT B-4609
-L- POT STA 14+50.00



CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 4

NOTE:
 PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
 AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
 DRAINAGE OUTLETS.

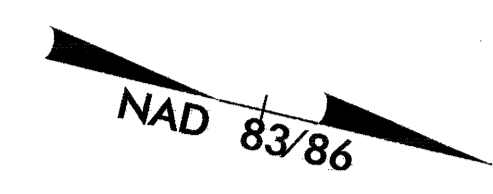
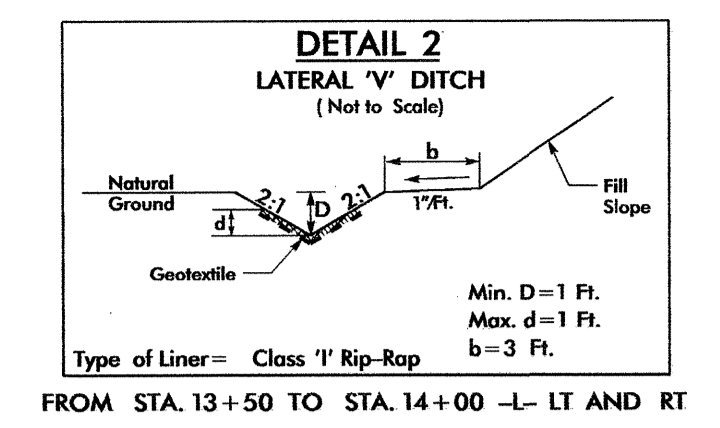
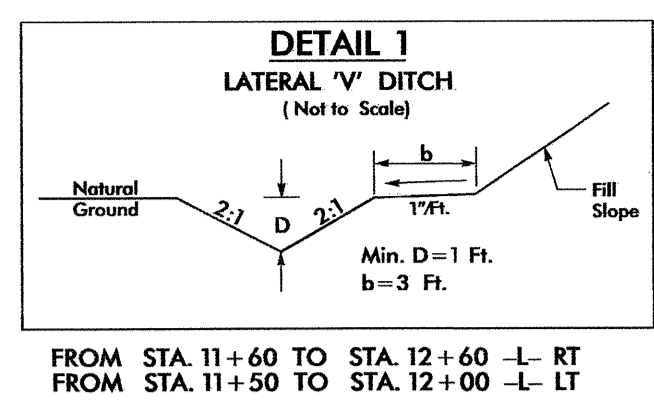
FOR -L- & -DRV- PROFILES SEE SHEET 5
 FOR STRUCTURE PLANS SEE SHEETS S-I THROUGH S-IB

03-SEP-2013 08:27
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 AT 11/26/2013

PROJECT REFERENCE NO. B-4609		SHEET NO. EC-5/CONST.4	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

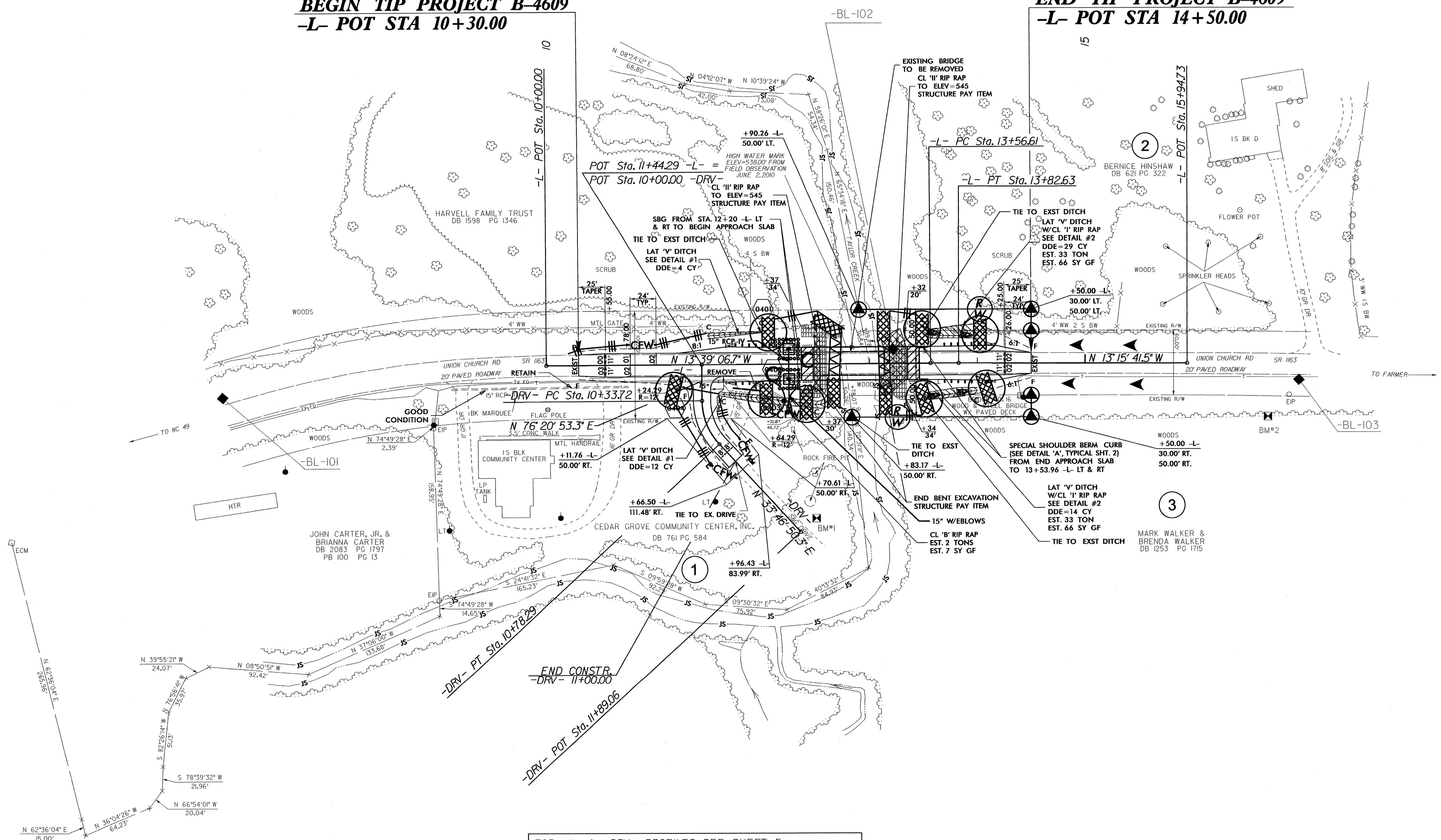
-DRV-
 PI Sta 10+57.09
 $\Delta = 42' 34" 03.0"$ (LT)
 $D = 95' 29" 34.7"$
 $L = 44.58'$
 $T = 23.37'$
 $R = 60.00'$

-L-
 PI Sta 13+69.62
 $\Delta = 0' 23' 25.2"$ (RT)
 $D = 1' 30' 00.0"$
 $L = 26.02'$
 $T = 13.01'$
 $R = 3,819.72'$
 S.E. = SEE PLANS
 RO = SEE PLANS



BEGIN TIP PROJECT B-4609
-L- POT STA 10+30.00

END TIP PROJECT B-4609
-L- POT STA 14+50.00



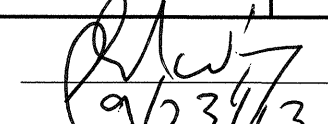

FOR -L- & -DRV- PROFILES SEE SHEET 5
 FOR STRUCTURE PLANS SEE SHEETS S-1 THROUGH S-18

03-SEP-2013 08:23 D:\psh\dgn\B-4609.EC.psh.dgn
 6/17/99
 03-SEP-2013 08:23 D:\psh\dgn\B-4609.EC.psh.dgn
 6/17/99

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
RANDOLPH COUNTY

LOCATION: BRIDGE No. 16 OVER TAYLOR CREEK ON SR 1163 (UNION CHURCH ROAD)

TIP NO. B-4609	SHEET NO. SIGN-1
APPROVED: 	
DATE: 9/23/13	
SEAL	
	

T.I.P.: B-4609

CONTRACT: C203282

SUMMARY OF QUANTITIES

ITEM NO.	DESC. NO.	SECT. NO.	ITEM DESCRIPTION	QUANTITY	UNIT
4072000000	903		SUPPORTS, 3 LB STEEL U-CHANNEL.....	78	L.F.
4096000000	904		SIGN ERECTION, TYPE D.....	2	EA.
4155000000	907		DISPOSAL OF SIGN SYSTEM, U-CHANNEL.....	6	EA.
4116100000	904		SIGN ERECTION, RELOCATE SIGN TYPE E.....	1	EA.

ROADWAY STANDARD DRAWING

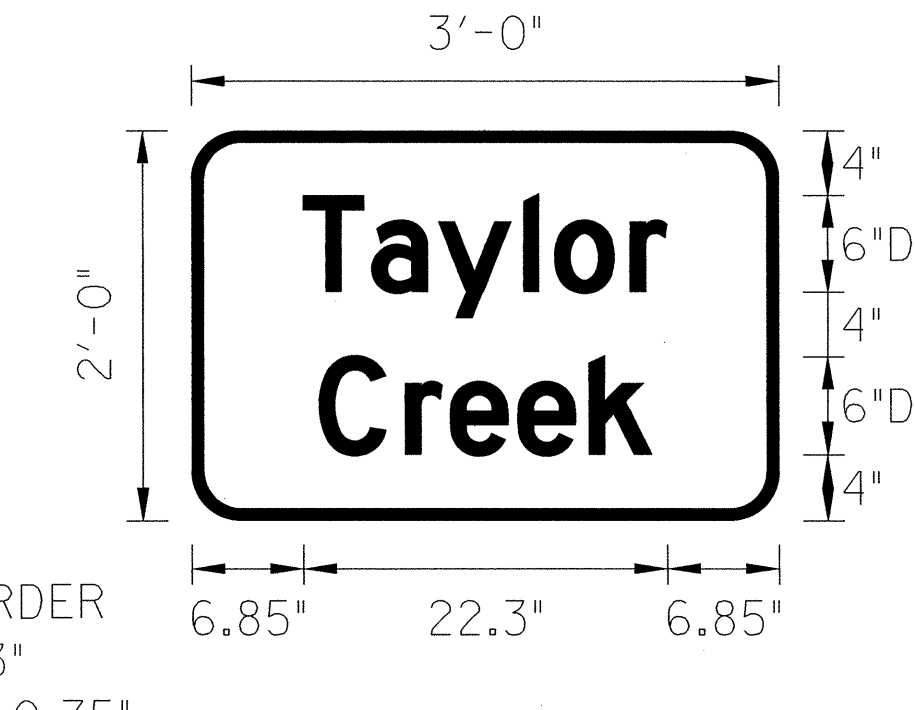
THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

GENERAL NOTES

- SIGNS FURNISHED BY STATE
- ALL TYPE 'D' SIGNS SHALL BE MOUNTED ON TWO U-CHANNEL POSTS UNLESS OTHERWISE INDICATED ON THE PLANS.
- SIGNING PLANS DO NOT INCLUDE TEMPORARY CONSTRUCTION SIGNING. SEE TRAFFIC CONTROL PLANS.
- ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

SIGN NUMBER: 301, 302 TYPE: D QUANTITY: 2 SIGN WIDTH: 3'-0" HEIGHT: 2'-0" TOTAL AREA: 6.0 Sq.Ft. BORDER TYPE: FLUSH RECESS: 0" WIDTH: 0.75" RADII: 3" NO. Z BARS: LENGTH:	BACKG COLOR: Green COPY COLOR: White SYMBOL X Y WID HT MAT'L: 0.125" (3.2 mm) ALUMINUM	DESIGN BY: A. GRADY PROJECT ID: B-4609	CHECKED BY: S. KUNZ DIV: 8	DATE: Aug 14, 2013
--	--	---	-------------------------------	--------------------



USE NOTES: 1,2

- Legend and border(except those that are colored black) shall be direct applied Grade C sheeting.
- Background shall be Grade C reflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter

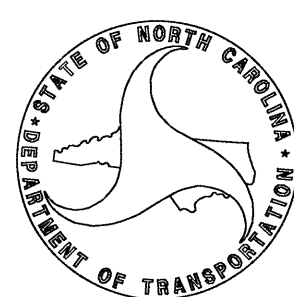
Letter	Spacing	Letter	Spacing	Letter	Spacing	Letter	Spacing	Letter	Spacing	Letter	Spacing	Series/Size Text Length	
T	6.8	a	4.2	y	4.1	l	5.2	o	1.9	r	4.6	22.3	D 2000
C	7.8	r	5.3	e	2.8	e	4.1	k	4.4			22.3	D 2000
												20.4	

FILENAME: B-4609_Sgn_Sgn_SignDesign

NORTH CAROLINA D.O.T. SIGN DETAIL

PLAN PREPARED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

SUSAN B. KUNZ SIGNING & DELINEATION REGIONAL ENGINEER
ADAM GRADY SIGNING & DELINEATION PROJECT DESIGN ENGINEER



PROJECT NOTES

- | | |
|---|------------------------------------|
| 1 | DISPOSAL OF SIGN SYSTEM, U-CHANNEL |
| 2 | RELOCATE SIGN, TYPE E |

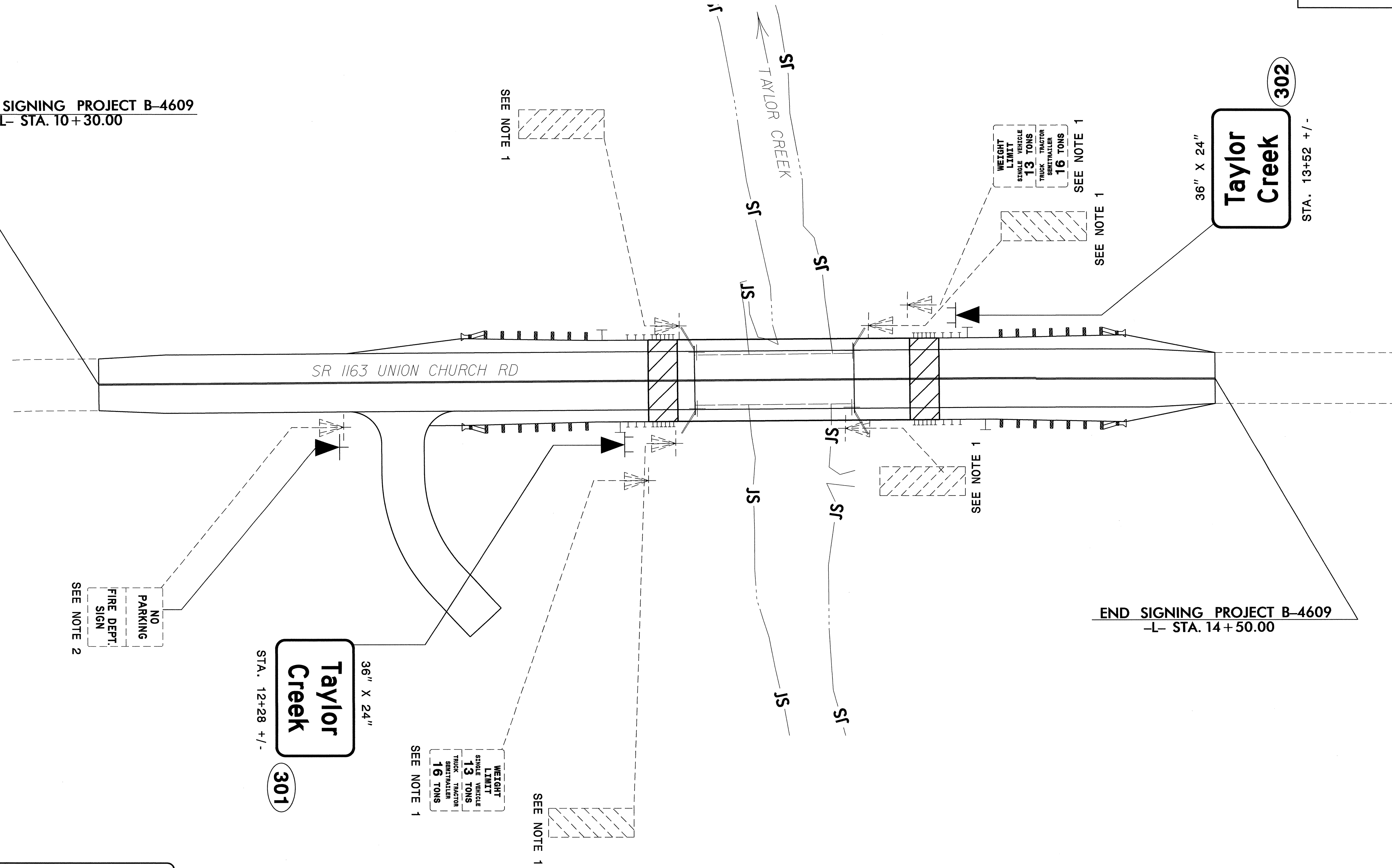
INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET, SIGN DESIGN, NOTES
SIGN-2	SIGN DETAIL SHEET

TIP NO. B-4609	SHEET NO. SIGN-2
APPROVED: <i>[Signature]</i>	
DATE: 9/23/13	
SEAL	

BEGIN SIGNING PROJECT B-4609
-L- STA. 10+30.00

END SIGNING PROJECT B-4609
-L- STA. 14+50.00



PROJECT NOTES

- 1 DISPOSAL OF SIGN SYSTEM, U-CHANNEL
- 2 RELOCATE SIGN, TYPE E

SIGN DETAIL SHEET

23-SEP-2013 11:44
 P:\I\Projects\B-4609\Traffic\Signing\CADD\Signing Layout Plots\Bridgeseed.dgn
 engray AT 12/27/13

05/08/99

26-AUG-2013 13:42
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\$\$\$\$\$USERNAME\$\$\$\$\$

TIP PROJECT: B-4609

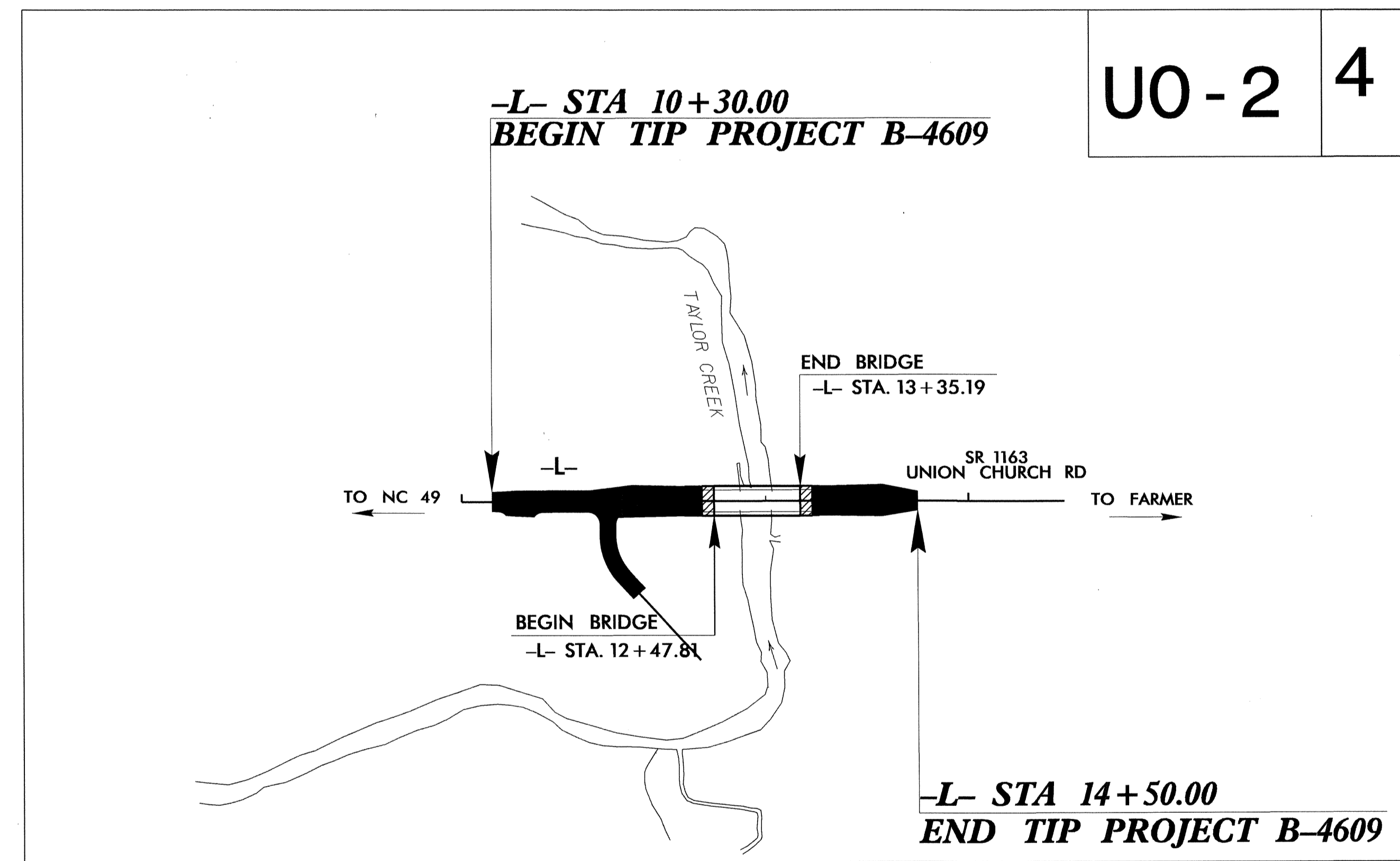
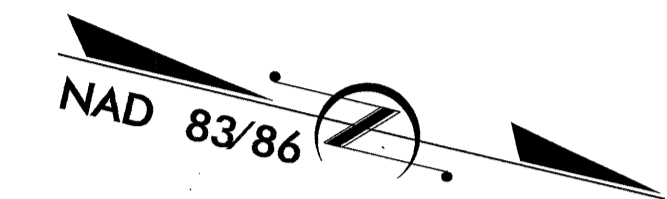
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
B-4609	UO-1

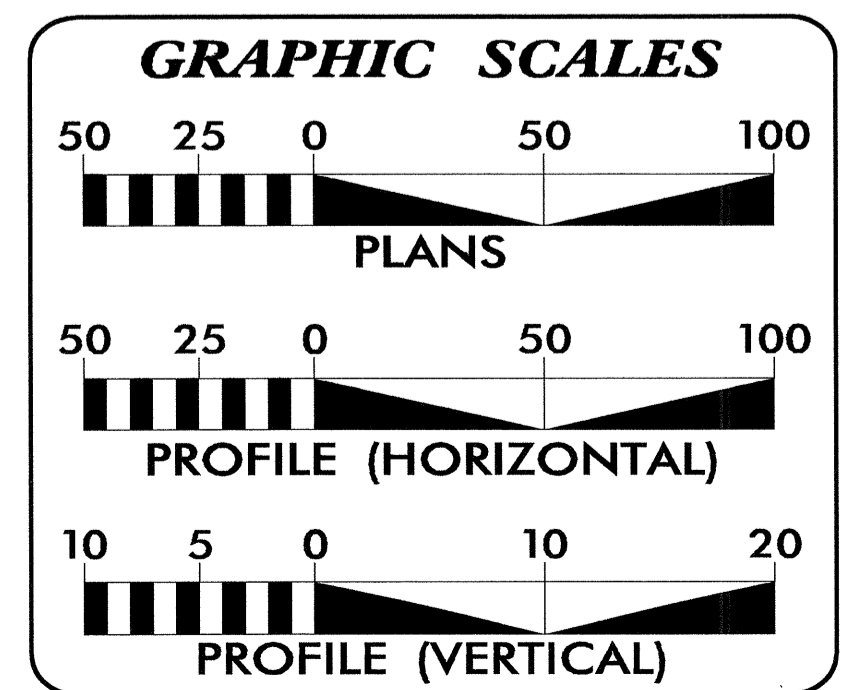
**UTILITIES BY OTHERS PLANS
RANDOLPH COUNTY**

**LOCATION: BRIDGE NO. 16 OVER TAYLOR CREEK
ON SR 1163**

TYPE OF WORK: UTILITIES



UO-2 4

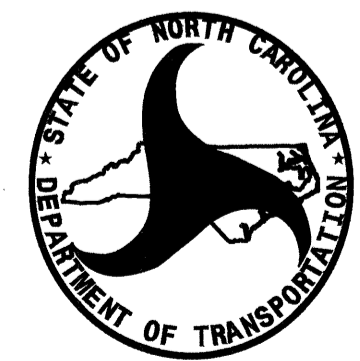


INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITY BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT

(A) CENTURY LINK CO. TFO AND TEL.
(B) TIME WARNER CABLE, TVC.



PREPARED IN THE OFFICE OF:
**DIVISION OF HIGHWAYS
UTILITIES UNIT
UTILITIES ENGINEERING**

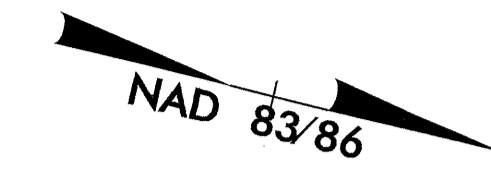
1555 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Steve McKee, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Jamshid Hafshejani UTILITIES PROJECT DESIGNER

PLANS PREPARED BY:
PARSONS
 RALEIGH, NORTH CAROLINA, 1919 854-1346
 NC LICENSE NO. F-0246
 FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

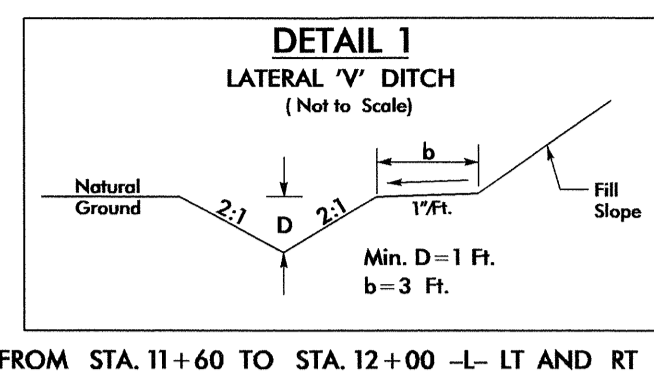
UTILITIES BY OTHERS

NOTE:
 ALL PROPOSED UTILITY WORK
 SHOWN ON THIS SHEET WILL
 BE DONE BY OTHERS

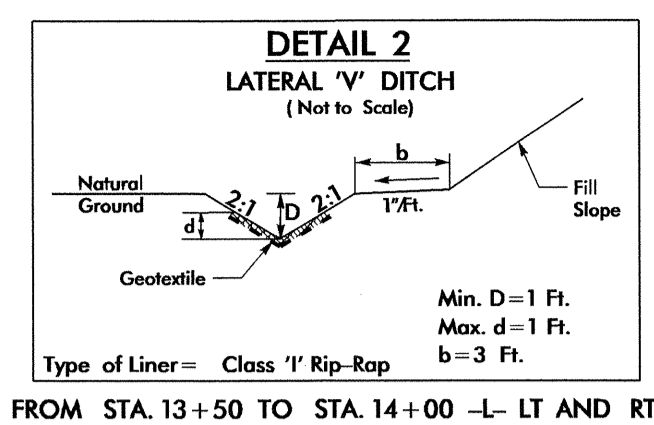


-DRV-
 PI Sta 10+57.09
 $\Delta = 42^\circ 34' 03.0''$ (LT)
 D = 95' 29' 34.7"
 L = 44.58'
 T = 23.37'
 R = 60.00'

-L-
 PI Sta 13+69.62
 $\Delta = 0^\circ 23' 25.2''$ (RT)
 D = 1' 30' 00.0"
 L = 26.02'
 T = 13.01'
 R = 3,819.72'
 S.E. = SEE PLANS
 RO = SEE PLANS



FROM STA. 11+60 TO STA. 12+00 -L- LT AND RT

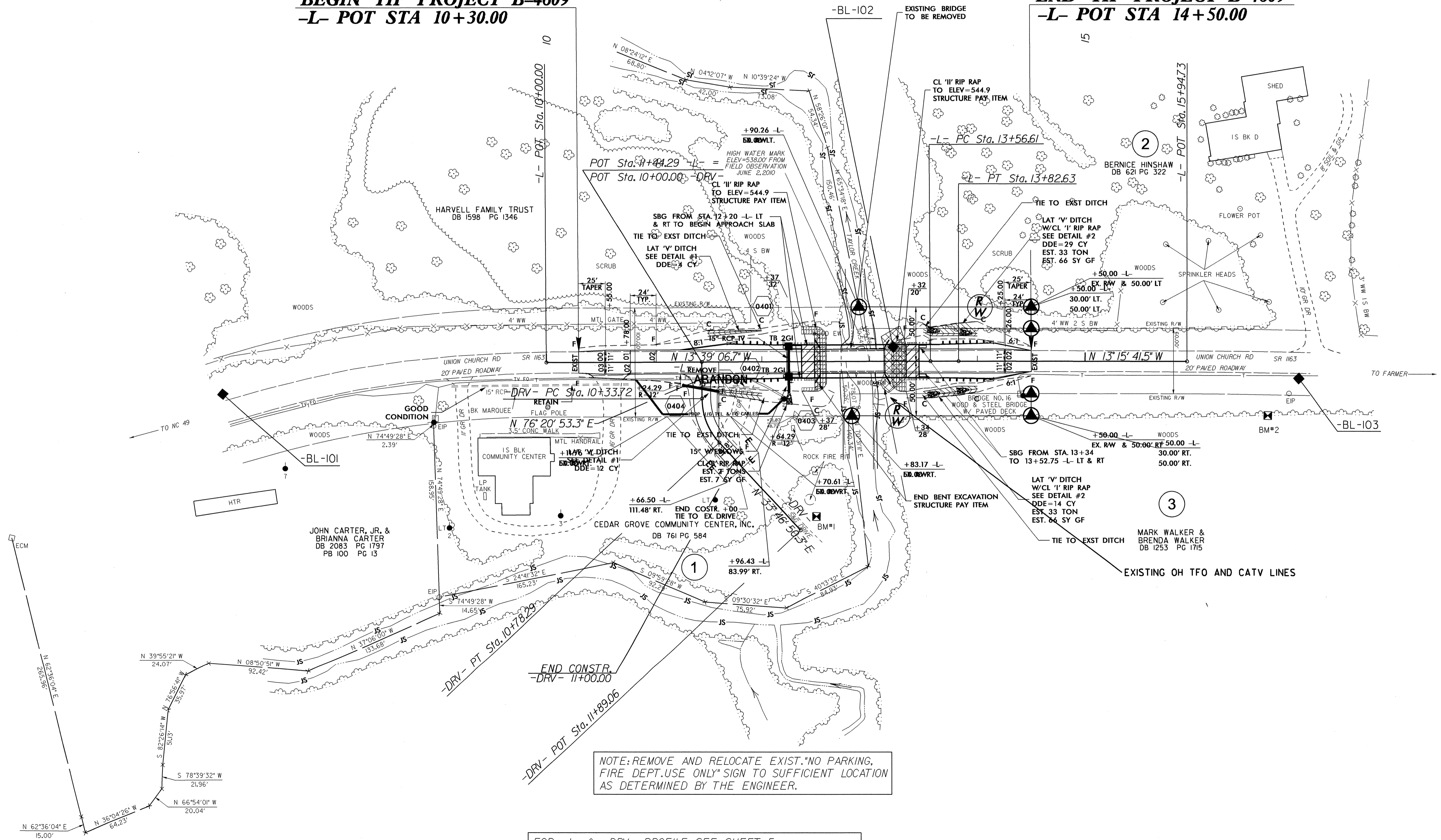


FROM STA. 13+50 TO STA. 14+00 -L- LT AND RT

NOT:
 UNDER GROUND TWC WILL BE ABANDON BY
 DATE OF AVAILABILITY.
 CENTURY LINK WILL COMPETE THEIR
 RELOCATION BY DATE OF AVAILABILITY.

BEGIN TIP PROJECT B-4609
-L- POT STA 10+30.00

END TIP PROJECT B-4609
-L- POT STA 14+50.00



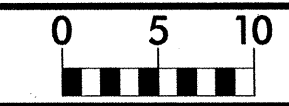
NOTE: REMOVE AND RELOCATE EXIST. "NO PARKING, FIRE DEPT. USE ONLY" SIGN TO SUFFICIENT LOCATION AS DETERMINED BY THE ENGINEER.

FOR -L- & -DRV- PROFILE SEE SHEET 5
 FOR STRUCTURE PLANS SEE SHEETS S-? THROUGH S-?

REVISIONS

5/14/99
 27-AUG-2013 10:57 UC:\P\proj\B-4609_Ut_U02.dgn
 13:38:31 USER:RCH/PLN/ENG/1313

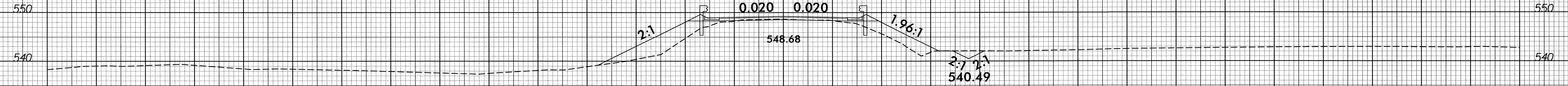
8/23/99



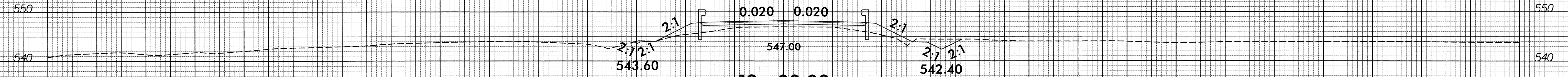
PROJ. REFERENCE NO.
B-4609

SHEET NO.
X-1

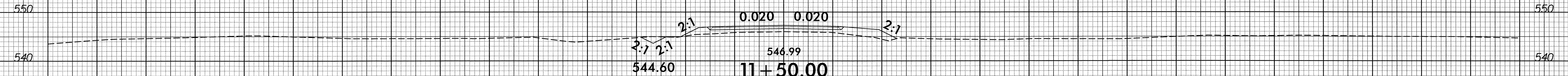
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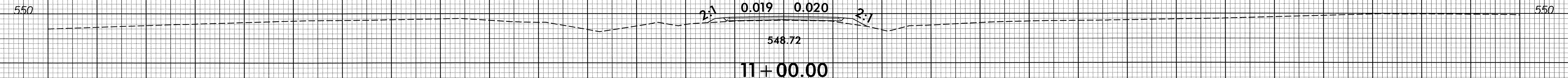
BEGIN BRIDGE -L- STA 12+47.81
12+47.81



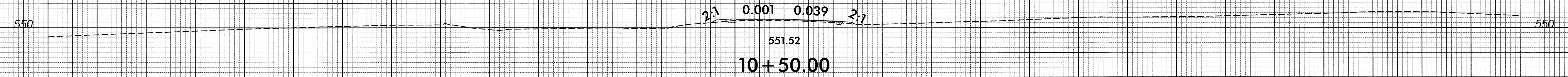
12+00.00



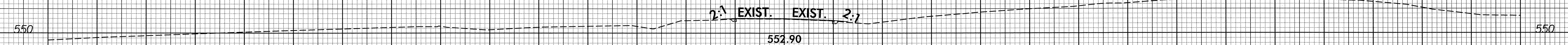
11+50.00



11+00.00



10+50.00

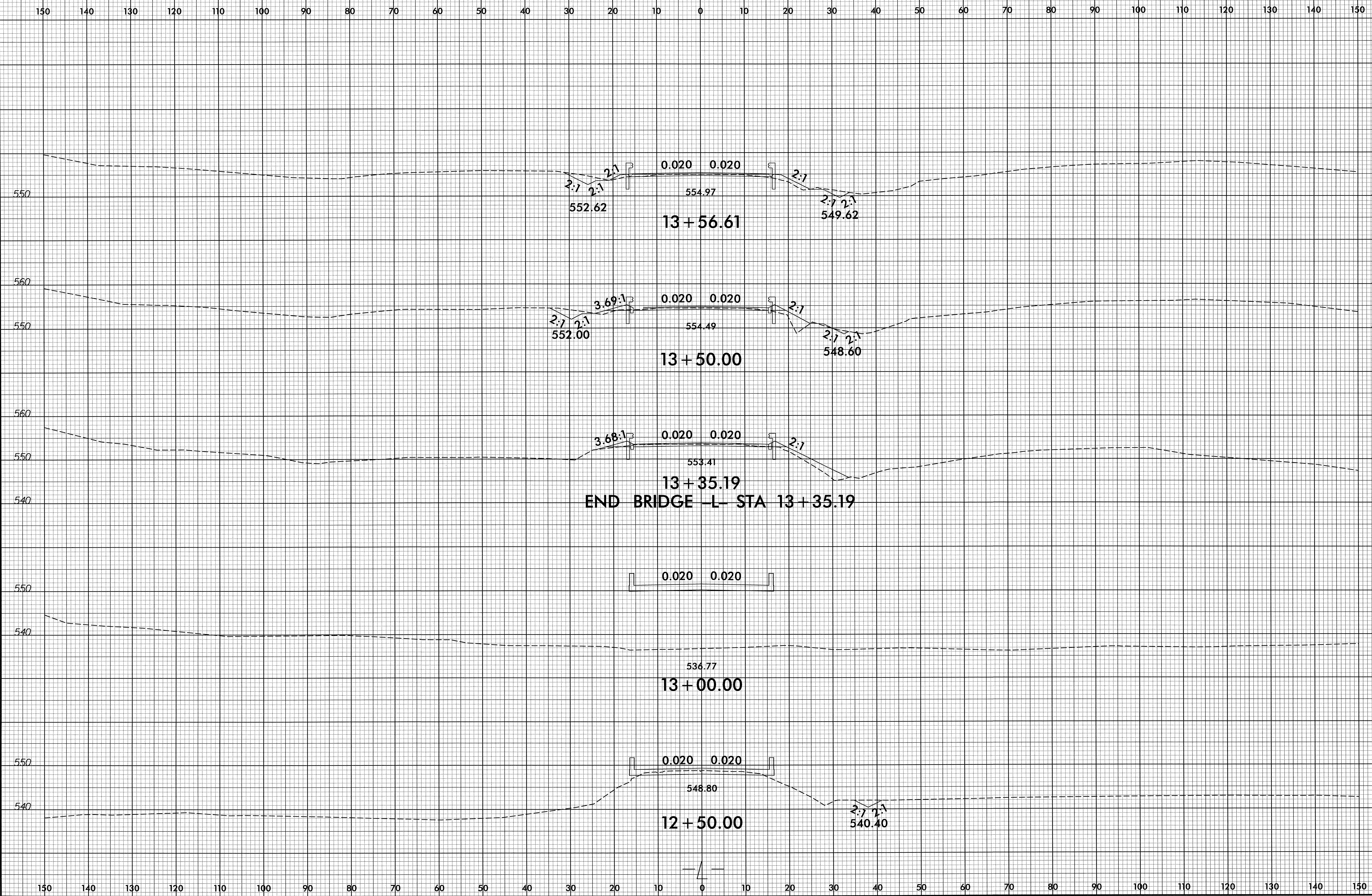


BEGIN TIP PROJECT -L- STA 10+30.00
10+30.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

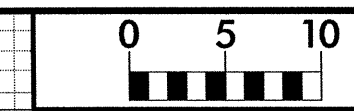
23-SEP-2013 14:58
J:\B-4609\Roadway\XSC\B-4609_Rdy-yp.l.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

8/23/99



23-SEP-2013 11:58 J:\B-4609\Roadway\XSC\B-4609_Rdy_xpl.dgn

8/23/99

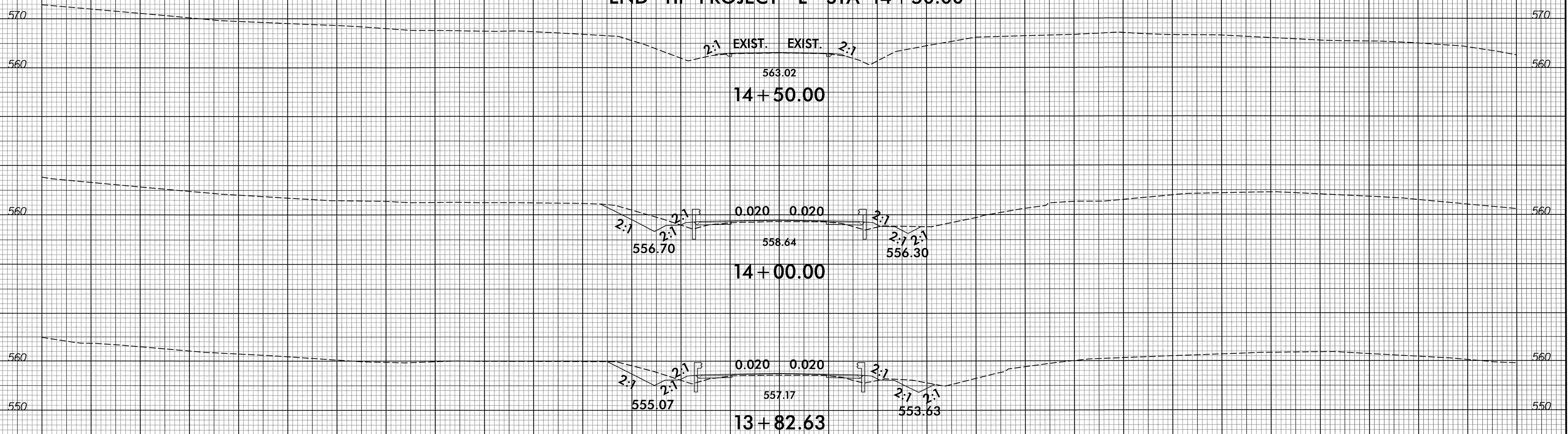


PROJ. REFERENCE NO.
B-4609

SHEET NO.
X-3

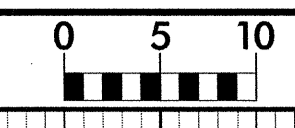
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END TIP PROJECT -L- STA 14+50.00



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

21-SEP-2013 11:58
J:\B-4609\Roadway\XSC\B-4609_Rdy_xpl.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

